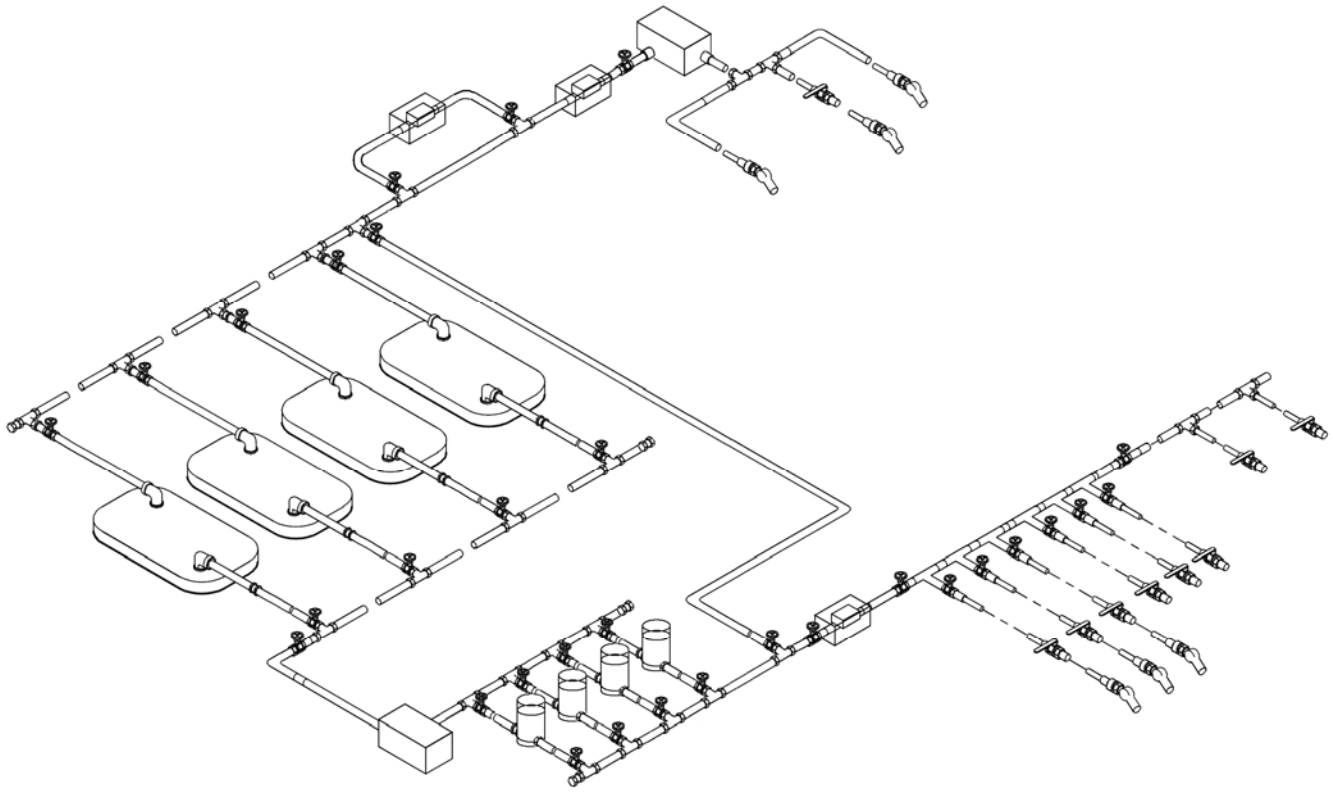
TM 10-4930-363-14

TECHNICAL MANUAL

OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE MANUAL FOR

800,000 GALLON FUEL SYSTEM SUPPLY POINT (FSSP) (NSN 4930-01-545-6669)



HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 2008

WARNING SUMMARY

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

FUELING OPERATIONS

Death or severe injury can occur from fire and explosion of fuels ignited by static electric discharge. Before operating the FSSP ensure all components are properly grounded. To avoid fire and explosion during operation of the FSSP:

Do not allow any flame producing material within 100 feet of the FSSP.

Do not smoke or allow smoking during refueling operations.

Do not allow fuel to drip onto hot surfaces.

Do not refuel equipment while its engine is running.

Do not allow fuel to come into contact with exposed skin. ALWAYS wear personal protective gear.

Do not allow spilled fuel to get into eyes. ALWAYS wear goggles when refueling or cleaning up any fuel spill.

Personnel must wear chemical resistant gloves when handling fuels of system components. Promptly wash exposed skin and change fuel-soaked clothing.

SPILLS

Small Priming Spills – A small priming spill is not usually dangerous. Use the spill kits bag of granular absorbent to spread over the spill. Dig up the absorbent and contaminated soil using the 2-piece non-sparking shovel and place the absorbent and soil into plastic disposal bags. Use tie strips to seal the bags. Store and transport the bags in the 55 gallon drums marked with the “Hazardous Material” caution plate. A fire guard should stand by the spill area with a fire extinguisher until the cleanup operation is completed.

Death or severe injury can occur from fire and explosion of fuels. Spilled fuel can ignite or explode and cause serious injury or death to operating personnel. DO NOT use rags to clean up the spill if low flash point fuel such as AVGAS or JP-4.

Small Spills – Stop operation at the spill site, and post a fire guard with a fire extinguisher by the spill. First use the spill kits 10 foot long enclosed oil absorbents which are filled with loose absorbent material to contain the spill by forming a dike around it.

Once contained, spread the granular absorbent over the spill. The kits 16.5 in. wide X 20 in. long absorbent pads may also be used to absorb the spill. If low flash point fuel such as AVGAS or JP-4 has been spilled, dig up the absorbent and contaminated soil using the 2-piece non-sparking shovel and place them either in the kits five gallon pails or plastic disposal bags sealed with the tie strip. Store and transport the pails or bags in the 55 gallon drums.

Death or severe injury can occur from fire and explosion of fuels. Spilled fuel can ignite or explode and cause serious injury or death to operating personnel.

WARNING SUMMARY – CONTINUED

SPILLS – Continued

Large Spills – The first thing to do is stop the flow of fuel if possible. At a permanent installation or large temporary refueling point where there is a fire department or fire brigade, call the fire fighters immediately and stop operations in the area. As soon as the fire assistance has been called, the actions described below should be performed as necessary.

Personnel. It may be necessary to have all personnel leave a vehicle if the spill is at or near it. No one other than authorized personnel should move through the spill area. If anyone gets fuel on any clothing, they should take them off and wash them with soap and water. Any person whose clothes are on fire should roll or be rolled on the ground to put out the fire or be wrapped in a blanket to smother the flames.

Mobile Refueling Equipment. This equipment may be the largest single source of fuel near the spill. If the fuel spill has not caught fire, starting the engine of a refueler or other vehicle could supply the spark that would ignite the spill or vapors. The decision on what procedure is least hazardous, driving the refueler away or not starting the engine, must be made on the spot by the person in charge. If the vehicle engine is running, normal practice is to drive the vehicle away from the spill unless this would pose an unacceptable risk to the driver.

Aircraft. If an aircraft in the spill area has its engine running at the time of the spill, usually it should lift off out of the spill area. The heat of the engines can cause the spill to ignite. The rotor or prop wash from an aircraft can spread the vapor hazard to an area where ignition sources may be present, thus increasing the danger. It can also cause problems by dissipating fire fighting agents.

JEWELRY

Remove rings, bracelets, wristwatches, dog tags and neck chains before working around or on a unit.

FIRST AID

First aid instructions are given in FM 4-25.11, First Aid.

HEAVY OBJECTS

Handling heavily weighted objects can cause bodily injury. Do not lift materials or equipment over 50 lb without using appropriate material handling equipment.

HAZARD REPORTING

Report all hazards. It is your responsibility to report hazards through your chain-of-command.

NUCLEAR, BIOLOGICAL OR CHEMICAL

In the event equipment has been exposed to nuclear, biological or chemical warfare, the equipment shall be handled with extreme caution and decontaminated in accordance with FM 3-5, NBC Decontamination. Unprotected personnel can experience injury or death if residual toxic agents or radioactive material are present. If equipment is exposed to radioactive, biological or chemical agents, personnel must wear protective mask, hood, protective over garments, chemical gloves and chemical boots in accordance with the MOPP level prescribed by the OIC or NCOIC.

WARNING SUMMARY – CONTINUED

NOISE

Single hearing protection must be worn when pumps are operating.

ICE BUILDUP

Cold weather operations could create ice buildup on exposed surfaces producing hazardous footing conditions. Use extreme care when operating under icing conditions; death or serious injury to personnel could occur.

EXPLANATION OF SAFETY WARNING ICONS

EAR PROTECTION - Headphones over ears shows that noise level will harm ears.

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

ELECTRICAL 2 - Electrical wire to arm with electricity symbol running through body shows that shock hazard is present.

EYE PROTECTION - Person with goggles shows that the material will injure the eyes.

FALLING PARTS - Arrow bouncing off human shoulder and head shows that falling parts present a danger to life or limb.

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

FLYING PARTICLES 2 - Arrows bouncing off face with face shield shows that particles flying through the air will harm face.

HEAVY OBJECTS - Human figure stooping over heavy object shows physical injury potential from improper lifting technique

WARNING SUMMARY – CONTINUED

EXPLANATION OF SAFETY WARNING ICONS - CONTINUED

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

HEAVY PARTS 2 - Hand with heavy object on top shows that heavy parts can crush and harm.

HEAVY PARTS 3 - Heavy object on human figure shows that heavy parts present a danger to life or limb.

HEAVY PARTS 4 - Heavy object pushed up against human figure shows that heavy parts present a danger to life or limb.

HELMET PROTECTION - Arrow bouncing off head with helmet shows that falling parts present a danger.

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

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

MOVING PARTS 3 - 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 foot shows that a sharp object presents a danger to limb.

WARNING SUMMARY – CONTINUED

EXPLANATION OF SAFETY WARNING ICONS - CONTINUED

SHARP OBJECT 2 - Sharp 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.

EXPLANATION OF HAZARDOUS MATERIALS ICONS

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

CRYOGENICS - Hand in block of ice shows that the material is extremely cold and can injure human skin or tissue.

EXPLOSION - Rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.

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

POISON - Skull and crossbones shows that a material is poisonous or is a danger to life.

RADIATION - Three circular wedges shows that the material emits radiate energy and can injure human tissue.

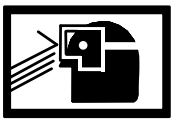
VAPOR - Human figure in a cloud shows that material vapors present a danger to life or health.

WARNING SUMMARY – CONTINUED

HAZARDOUS MATERIALS DESCRIPTION

WARNING

CHEMICAL



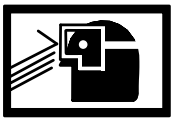
EYE PROTECTION

ANTISEIZE COMPOUND, MIL-T-5544

Antiseize compound can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: if hot grease strikes the skin, drench or immerse the area in water to assist cooling. If available, apply iced water or ice packs to the burned area. Do not use ice water or cold packs if the burned area covers more than 10% of the body, as this may contribute to shock. Do not try to remove grease from a burn after it has cooled. Seek medical attention. If cool grease contacts skin, wash the area with soapy water. First aid for eye contact: flush with plenty of water for 15 minutes while holding eyelids open. Get medical attention. First aid for slight inhalation: remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. First aid for ingestion: Do not induce vomiting. In general, no treatment is necessary unless a large quantity of antiseize compound is ingested. Get medical advice.

WARNING

CHEMICAL



EYE PROTECTION

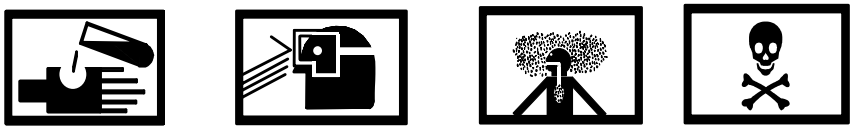
BALL AND ROLLER BEARING GREASE, DOD-G-24508

When working with ball and roller bearing grease, DOD-G-24508, avoid contact with eyes or skin. Wear protective rubber gloves and chemical splash goggles. Use only with adequate ventilation. Injection under skin can cause local necrosis. Accidental ingestion of this material may cause irritation of digestive tract. First aid for ingestion: do not induce vomiting. Seek medical attention or advice. First aid for skin contact: remove contaminated clothing. Wipe off excess and then wash skin thoroughly with soap and water or waterless hand cleaner. If injected under skin, seek immediate medical attention. Contaminated clothing should be laundered immediately. Discard any contaminated leather goods. If symptoms persist, seek medical attention. First aid for eye contact: flush eyes with clean water for 15 minutes. Seek medical attention. First aid for inhalation: move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, seek medical attention.

WARNING SUMMARY – CONTINUED

HAZARDOUS MATERIALS DESCRIPTION – CONTINUED

WARNING

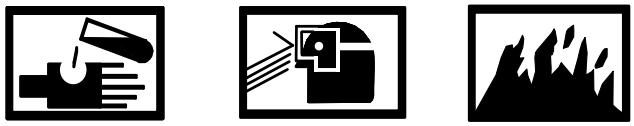


CHEMICAL EYE PROTECTION VAPOR POISON

FUEL ADDITIVES

Fuel additives can be toxic. Avoid prolonged or repeated breathing of vapors or contact with skin. Use only with adequate ventilation. Wear latex or rubber gloves and chemical splash goggles. Protective clothing should be worn when using fuel additives and an eye wash station and safety shower should be available. If spilled, shovel dry spill into DOT approved drums for disposal. Absorb liquid spill with vermiculite. First aid for eyes: flush with water for 20 to 30 minutes, hold eyelids open. First aid for skin contact: flush with plenty of water. First aid for inhalation: remove to fresh air, provide CPR/oxygen if needed. First aid for oral consumption: if large quantities are swallowed and victim is conscious, drink lukewarm water. Do not induce vomiting. Call a physician at once.

WARNING



CHEMICAL EYE PROTECTION FIRE

JP-8 FUEL

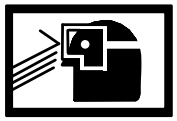
JP-8 fuel is toxic. Avoid prolonged or repeated breathing of vapors and contact with eyes or skin. Use only with adequate ventilation. Wear latex or rubber gloves and chemical splash goggles. First aid for ingestion: if swallowed do not induce vomiting. Drink two glasses of water or milk to dilute. Obtain medical attention. First aid for inhalation: if inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, use oxygen. Get medical attention. First aid for skin contact: remove contaminated clothing. Wash area with soap and water. Remove contaminated clothing, launder immediately and discard contaminated leather goods. If irritation persists, seek medical attention. First aid for eye contact: in case of contact, immediately flush eyes with plenty of water for at least 20 minutes, retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Serious harm (damage) may result if treatment is delayed. Continue to flush eyes while awaiting medical attention. Get medical attention and monitor the eye daily as advised by a physician.

WARNING SUMMARY – CONTINUED

HAZARDOUS MATERIALS DESCRIPTION – CONTINUED

WARNING

CHEMICAL



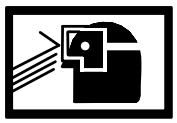
EYE PROTECTION

SEALING COMPOUND, 567

Sealing compound is toxic. Avoid prolonged or repeated breathing of vapors and contact with eyes or skin. Use only with adequate ventilation. Wear latex or rubber gloves and chemical splash goggles. First aid for ingestion: If swallowed do not induce vomiting. Keep individual calm. Obtain medical attention. First aid for inhalation: If inhaled, remove to fresh air. If symptoms develop and persist, get medical attention. First aid for skin contact: Wash area with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. If irritation persists, seek medical attention. First aid for eye contact: Immediately flush eyes with plenty of water, preferably lukewarm water, for at least 15 minutes, holding eyelids open all the time. Get medical attention. Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

WARNING

CHEMICAL



EYE PROTECTION

SEALING COMPOUND, 24231

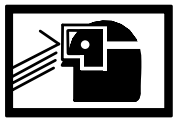
When working with sealing compound, 24231, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use with adequate ventilation. First aid for ingestion: do not induce vomiting. Keep individual calm. Seek immediate medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. Wash clothing before reuse. If symptoms occur, seek medical attention. First aid for eye contact: flush with large amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Seek medical attention. First aid for inhalation: move to fresh air. If symptoms persist, seek medical attention.

WARNING SUMMARY – CONTINUED

HAZARDOUS MATERIALS DESCRIPTION – CONTINUED

WARNING

CHEMICAL



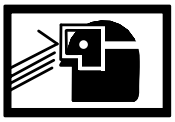
EYE PROTECTION

SEALING COMPOUND, MIL-S-45180

Avoid contact with eyes or skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Ingestion can damage internal organs, eyes, central nervous system and reproductive system. First aid for ingestion: induce vomiting. Keep individual calm. Seek medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. Seek medical attention. First aid for eye contact: immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention. First aid for inhalation: move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

WARNING

CHEMICAL



EYE PROTECTION

POISON

SOLVENT CLEANING COMPOUND, MIL-PRF-680

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician. If overcome by vapors, move from exposed area and call a physician. In case of ingestion, do not induce vomiting, call a physician immediately.

WARNING SUMMARY – CONTINUED

HAZARDOUS MATERIALS DESCRIPTION – CONTINUED

WARNING

HOT AREA

PALLETS EXPOSURE TO DIRECT SUNLIGHT HEAT

Pallets are fabricated from polyethylene and should not be exposed to direct sunlight in high heat for extended periods. Return pallets to TRICONs after pallet is unloaded.

Do not transport pallet with unsecured/unstrapped components. Transport of pallets with unsecured/ unstrapped components may result in damage to the equipment and/or injury to personnel.

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 . . . . . 15 July 2008

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HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C.,15 JULY 2008

TECHNICAL MANUAL

OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE MANUAL FOR 800,000 GALLON FUEL SYSTEM SUPPLY POINT (FSSP) NSN 4930-01-545-6669

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. The DA Form 2028 is located under the Public Applications section on the AEPS Publc Home Page. Fill out the form and click SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage DA Form 2028 program. You may also mail, email, or fax your comments on DA Form 2028 directly to: U. S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LMPP/TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is tacomlcmc.daform2028@us.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

CURRENT AS OF 28 MAY 2008

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Information is accessed by referring to the Table of Contents, located in the front of this manual, or by looking in the Alphabetical Index, located in the back of this manual.

b. Illustrations

Various methods are used to locate, operate and repair or replace components. Locator illustrations in Controls and Indicators tables, PMCS tables, exploded views and cut-away diagrams make the information in the manual easier to understand and follow.

c. Using This Manual

When using this manual, read and understand the entire operator or maintenance action before performing the task. Also, read and understand all warnings, cautions and notes, as well as general safety precautions that apply to the task to be performed. The warning summary will inform personnel of hazards associated with the equipment to be worked on. However, the summary is not all inclusive and personnel should be aware at all times of hazardous conditions that may arise.

Prior to starting the procedures in this manual, read the initial setup requirements located directly above each procedure. The information is given to ensure all materials, expendables; tools and any other equipment necessary are readily available for use. The initial setup will be accomplished prior to starting the actual steps of each operator or maintenance procedure.

LOCATING MAJOR COMPONENTS

Obtain the manual for the system to be worked on. Open to the Table of Contents located in the front of this manual. Find Chapter 1, *General Information, Equipment Description and Theory of Operation*. Under the chapter title you will find the work package titled Equipment Description and Data. Turn to the work package indicated. This work package will give a brief description of the major components, and show an illustration of what the component looks like and its location.

The Alphabetical Index, located in the back of this manual, contains an alphabetical list of all sections of this manual. Equipment Description and Data is found in section E. The work package is found on the right side of the title where the Equipment Description and Data is located. Turn to the work package indicated to find the description and data of each component.

OPERATING INSTRUCTIONS

The Table of Contents or Alphabetical Index may be used to locate sections within this manual. To locate a particular operating procedure, open the manual to the Table of Contents located in the front of this manual. Find Chapter 2, *Operator Instructions*. Under this section, find the work package for the component you are trying to operate. To the right side of the procedure will be a work package number. Turn to the work package indicated and follow the steps to perform the procedure. The procedures list the how to set up the equipment, how to program the equipment and how to operate the equipment. Follow the procedures indicated to complete the task. At the top of the task you will have a section called INITIAL SETUP. There are six basic headings listed under INITIAL SETUP.

HOW TO USE THIS MANUAL – CONTINUED

OPERATOR INSTRUCTIONS - CONTINUED

Test Equipment: Test equipment does not pertain to operator troubleshooting work packages.

Tools: Lists all tools (standard or special) required to perform the task. Tools are identified with an item number from the Components of the End Item (COEI) and Basic Issue Items (BII) work package located in Chapter 10, *Supporting Information*.

Materials/Parts: Lists all parts or materials necessary to perform the task. Expendable and durables are identified with an item number from the Expendable and Durable Items List (EDIL) work package located in Chapter 10, *Supporting Information*. Mandatory replacement parts are identified with an item number from the Mandatory Replacement Parts List (MRPL) work package located in Chapter 10, *Supporting Information*.

Personnel Required: Lists all personnel necessary to perform the task.

Equipment Condition: Notes the conditions that must exist before starting the task. The equipment condition will also include any prerequisite maintenance tasks to be performed with reference to the work package number or to the TM number.

References: Includes any other manuals necessary to complete the task. When there are no references listed, all steps necessary to complete the task are contained within this manual. A listing of reference manuals are contained in the Reference work package in Chapter 10, *Supporting Information*.

TROUBLESHOOTING PROCEDURES

The Table of Contents or Alphabetical Index may be used to locate troubleshooting procedures within this manual. To locate a particular troubleshooting procedure, open the manual to the Table of Contents located in the front of this manual. Locate the chapter which pertains to your level of maintenance; Chapter 3, *Operator Maintenance Troubleshooting Procedures,* Chapter 4, Field *Maintenance Troubleshooting Procedures,* or Chapter 7, Sustainment *Maintenance Troubleshooting Procedures.* Under this section, find a work package titled *Troubleshooting Procedures Index*. Turn to the work package indicated, which lists all of the troubleshooting procedures. Look down the list until you find the appropriate work package for the problem you are trying to solve. To the right side of the procedure will be a work package number. Turn to the work package indicated and follow the steps to complete the troubleshooting procedure. The procedures list the symptom, malfunction and the corrective action. The corrective action will indicate which maintenance procedure to go to for the repair of the symptom. Follow the procedures indicated to complete the task. At the top of the task you will have a section called INITIAL SETUP. There are six basic headings listed under INITIAL SETUP.

Test Equipment: Lists all test equipment (standard or special) required to troubleshoot test and inspect the equipment covered in this manual. The test equipment is identified with an item number and work package number from the *Maintenance Allocation Chart* located in Chapter 10, *Supporting Information*.

Tools: Lists all tools (standard or special) required to perform the task. Tools are identified with an item number and work package number from the *Maintenance Allocation Chart* located in Chapter 10, *Supporting Information*.

Materials/Parts: Lists all parts or materials necessary to perform the task. Expendable and durables are identified with an item number from the Expendable and Durable Items List (EDIL) work package located in Chapter 10, *Supporting Information*.

Personnel Required: Lists all personnel necessary to perform the task.

HOW TO USE THIS MANUAL – CONTINUED

OPERATOR INSTRUCTIONS - CONTINUED

Equipment Condition: Notes the conditions that must exist before starting the task. The equipment condition will also include any prerequisite maintenance tasks to be performed with reference to the work package number or to the TM number.

References: Includes any other manuals necessary to complete the task. When there are no references listed, all steps necessary to complete the task are contained within this manual. A listing of reference manuals are contained in the Reference work package in Chapter 10, *Supporting Information*.

MAINTENANCE INSTRUCTIONS

To locate a maintenance procedure, open the manual to the Table of Contents located in the front of this manual. Locate the chapter which pertains to your level of maintenance; Chapter 5 for *Operator Maintenance Instructions,* Chapter 6 for Field *Maintenance Instructions,* Chapter 8 for Sustainment *Maintenance Instructions* or Chapter 9 for *General Maintenance Instructions*. Look down the list and find the maintenance procedure to be accomplished. On the right side of the maintenance procedure will be a work package number. Turn to the work package indicated. Before beginning the maintenance task, look through the procedure to familiarize yourself with the entire maintenance procedure. At the top of the task you will have a section called INITIAL SETUP. There are six basic headings listed under INITIAL SETUP.

Test Equipment: Lists all test equipment (standard or special) required to troubleshoot test and inspect the equipment covered in this manual. The test equipment is identified with an item number and work package number from the *Maintenance Allocation Chart* located in Chapter 10, *Supporting Information*.

Tools: Lists all tools (standard or special) required to perform the task. Tools are identified with an item number and work package number from the *Maintenance Allocation Chart* located in Chapter 10, *Supporting Information*.

Materials/Parts: Lists all parts or materials necessary to perform the task. Expendable and durables are identified with an item number from the Expendable and Durable Items List (EDIL) work package located in Chapter 10, *Supporting Information*. Mandatory replacement parts are identified with an item number from the Mandatory Replacement Parts List (MRPL) work package located in Chapter 10, *Supporting Information*.

Personnel Required: Lists all personnel necessary to perform the task.

Equipment Condition: Notes the conditions that must exist before starting the task. The equipment condition will also include any prerequisite maintenance tasks to be performed with reference to the work package number or to the TM number.

References: Includes any other manuals necessary to complete the task. When there are no references listed, all steps necessary to complete the task are contained within this manual. A listing of reference manuals are contained in the Reference work package in Chapter 10, *Supporting Information*.

REPAIR PARTS AND SPECIAL TOOLS LIST

Refer to Chapter 10, *Supporting Information,* when requisitioning parts, special tools and equipment. Identify the mandatory repair parts required to perform this task listed at the top of the work package in the INITIAL SETUP. Using the item number provided, refer to the mandatory replacement parts work package in Chapter 10. Using TM 10-4930-363-24P, look up the part number in the part number cross reference part number column and identify the figure and item number where the part is located. Turn to the figure in TM 10-4930-363-24P and locate the item number listed.

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

FIELD AND SUSTAINMENT MAINTENANCE GENERAL INFORMATION

SCOPE

This manual contains descriptions and instructions for the Fuel System Supply Point (FSSP) facility, which is used to support and improve the operational readiness of the fuel system supply point.

Type of Manual: Operator, Field and Sustainment Maintenance.

Model Number and Equipment Names: West Electronics Model Numbers 800K-FSP (800,000 gallon FSSP).

Purpose of Equipment: The FSSP covered by this manual is a specially assembled group of components designed to be used by forward area personnel to receive, dispense and store automotive gasoline, aviation gasoline, jet fuel and diesel fuel.

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 or AR 700-138, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If any component in your system needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to the address specified in DA PAM 750-8, or as specified by the contracting activity. We will send you a reply.

HAND RECEIPT (HR) MANUALS

There is no hand receipt manual for the FSSP.

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.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

The procedures for destruction of Army materiel to prevent enemy use are contained in TM 750-244-6.

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation/Acronym	Name
AEPS	Army Electronic Product Support
AL	Adaptor Length
AOAP	Army Oil Analysis Program
AR	Army Regulation
AT	Applied Torque
BFTA	Bag Farm Tank Assembly
BII	Basic Issue Items
C	Centigrade
CAGEC	Commercial and Government Entity Code
CCW	Counterclockwise
CI	Corrosion Inhibitor
CLR	Clear
cm	Centimeters
COEI	Components of End Item
CPC	Corrosion Prevention and Control
CPR	Cardiopulmonary Resuscitation
CW	Clockwise
DA	Department of the Army
Deg	Degree/Degrees
DT	Desired Torque
EIR	Equipment Improvement Recommendations
ESD	Electrostatic Discharge
F	Fahrenheit
F	Female
FGC	Functional Group Code
fl	Fluid
FM	Field Manual
FNC	Function
FSII	Fuel System Icing Inhibitor
FSSP	Fuel System Supply Point
ft	Feet/Foot
ft lb	Foot Pounds
FWD	Forward
gal	Gallon
GND	Ground
GPH	Gallons Per Hour
GPM	Gallons Per Minute
H	Height
HP	Horse Power
Hz	Hertz
IAW	In Accordance With
ID	Identification
in.	Inch/Inches
in. lb	Inch Pounds
INTL	International
ISO	International Standards Organization
K	Thousand
kg	Kilogram/Kilograms
kHz	Kilohertz

LIST OF ABBREVIATIONS/ACRONYMS – CONTINUED

Abbreviation/Acronym	Name
L	Length
L	Liter/Liters
Lb	Pound/Pounds
LPM	Liters per minute
LT	Length of Torque Wrench
M	Male
M	Meter/Meters
MAC	Maintenance Allocation Chart
min	Minute
mL	Milliliter/Milliliters
MTO&E	Modified Table of Organization and Equipment
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological or Chemical
NHA	Next Higher Assembly
N-m	Newton-Meters
NSN	National Stock Number
OC	On Condition
ODS	Ozone Depleting Substance
oz.	Ounce/Ounces
PMCS	Preventive Maintenance Checks and Services
PSI	Pounds Per Square Inch
RPSTL	Repair Parts and Special Tools List
SAE	Society of Automotive Engineers
SDA	Static Discharge Additive
SMR	Source Maintenance and Recoverability
sw	Switch
TAMMS	The Army Maintenance Management System
TEMP	Temperature
TM	Technical Manual
TMDE	Test Measurement and Diagnostic Equipment
TO&E	Table of Organization and Equipment
TRICON	Triple Container
U/M	Unit of Measure
W	Width
WP	Work Package

QUALITY OF MATERIAL

Material used for replacement, repair or modification must meet the requirements of this manual (TM 10-4930-363-14). If quality of material requirements are not stated in this manual (TM 10-4930-363-14), the material must meet the requirements of the drawings, standards, specifications or approved engineering change proposals applicable to the subject equipment.

SAFETY, CARE AND HANDLING

The 800K FSSP is not configured to pump various types of fuels at the same time. It must be assumed that residual fuel and fuel vapors are present in the FSSP at all times, even after draining or purging. Therefore the equipment must always be handled with the same degree of caution as actual fuel. One or more fully charged fire extinguishers must be present at all times, not only during operation. In addition, fuels may contain toxic additives. Rubber gloves should always be worn when handling FSSP components which are in regular contact with fuel.

A static electric charge is always present in all fuels. The charge increases when the fuel is being pumped, stirred, shook or splashed. Any physical movement of the fuel will increase the static charge. If the charge is allowed to build sufficiently it will discharge, causing a spark which will ignite fuel vapors. The buildup of a static electric charge is controlled by bonding and grounding of all fuel handling equipment. Ground rods and grounding cable assemblies are provided with the FSSP and must be inspected, maintained and used consistently and conscientiously to prevent fuel ignition due to electrostatic discharge.

Fuels are dangerous under all conditions. Always observe fuel handling safety precautions.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

The 800K FSSP is capable of receiving fuel from tank trucks, rail cars, pipeline and hose line. The FSSP can store a maximum of 840,000 gallons of fuel using four 210K-fuel tanks. Fuel is dispensed by pumping the fuel from the storage tanks to the nozzles at the dispensing points. Fuel can also be dispensed by bypassing the storage tanks and pumping the fuel directly from the receiving points to the distribution points.

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS

The FSSP is stored and transported in TRICON and ISO containers by fixed-wing aircraft, rail transport, ground vehicles, marine vessels and material handling equipment. The TRICONs are attached together with DURALOC connectors. Tables 1 through 14 outline the TRICON or ISO containers along with the associated component lists found in each container.

TRICON number 1 contains following components:

Table 1. TRICON 1 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
22	Hose Assembly, Suction, 4-inch x 10-feet
1	Flow Meter Assembly, Inline, 6-inch
1	Spill Containment Berm, 4-feet x 4-feet x 1-foot
1	Tee Assembly, Female 4-inch x Male 4-inch x Female 4-inch
3	Valve Assembly, Butterfly, 4 x 4-inch
6	Extinguisher, Fire, Dry-Chemical (Hand Portable)
4	Hose Assembly, Discharge, 6-inch x 10-feet
3	Stand Assembly, Nozzle and Valve
3	Ground Rod Assembly, Self Driving
2	Adapter, Female 4-inch x Male 6-inch
5	Pan, Drip
1	Container, TRICON, 8-feet x 6-feet 5 ¼ -inch x 8-feet
	Intermediate Case 1
1	Aircraft Pressure Refueling Nozzle, D-1 with 4-inch Male Camloc
1	Case, Transit, Desert, Tan
	Intermediate Case 2
1	Aircraft Pressure Refueling Nozzle, D-1 with 4-inch Male Camloc
1	Case, Transit, Desert, Tan
	Intermediate Case 3
1	Aircraft Pressure Refueling Nozzle, D-1 with 4-inch Male Camloc
1	Case, Transit, Desert, Tan
	Intermediate Case 4
3	Strainer, Inline, 4-inch
1	Case, Transit, Desert, Tan

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

TRICON number 2 contains following components:

Table 2. TRICON 2 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Fuel Spill Containment Berm
2	Valve Assembly, Gate, Female 4-inch x Male 4-inch
3	Extinguisher, Fire, Ry-Chemical (Hand Portable)
2	Hose Assembly, Discharge, 4-inch x 25-feet
8	Hose Assembly, Discharge, 6-inch x 10-feet
1	Fuel Additive Injector Assembly
1	Displacement and Evacuation Kit, 4-inch Hoseline
1	Displacement and Evacuation Kit, 6-inch Hoseline
1	Spill Containment Berm, 6-feet x 8-feet x 1-foot
1	Container, TRICON, 8-feet x 6-feet 5 ¼-inch x 8-feet
	Intermediate Case 1
6	Adapter, Double, Female x Female, 3-inch Nominal Size
1	Case, Transit, Desert, Tan
	Intermediate Case 2
6	Adapter, Double, Female x Female 4-inch Nominal Size
1	Case, Transit, Desert, Tan
	Intermediate Case 3
1	Coupling Set, Tank Truck, NATO
1	Case, Transit, Desert, Tan
	Intermediate Case 4
2	Coupling, Rail Tanker, NATO
1	Case, Transit, Desert, Tan

TRICON number 3 contains following components:

Table 3. TRICON 3 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
6	Valve Assembly, Butterfly, 4 x 4-inch
9	Valve Assembly, Gate, Female 4-inch x Male 4-inch
9	Extinguisher, Fire, Dry Chemical (Hand Portable)
7	Hose Assembly, Discharge, 6-inch x 10-feet
8	Stand Assembly, Nozzle and Valve
1	Flow Meter Assembly, Inline, 6-inch
1	Spill Containment Berm, 4-feet x 4-feet x 1-foot
1	Reducer, Female 6-inch x Male 4-inch
15	Pan, Drip
1	Container, TRICON, 8-feet x 6-feet 5 ¼-inch x 8-feet
	Intermediate Case 1
1	Reducer, Male 4-inch x Female 3-inch
1	Aircraft Pressure Refueling Nozzle, D-1, with 4-inch Female Camloc
1	Case, Transit, Desert, Tan

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

Table 3. TRICON 3 (Components List For The 800,000 Gallon FSSP)-Continued.

QTY REQ	NOMENCLATURE OR DESCRIPTION
	Intermediate Case 2
1	Reducer, Male 4-inch x Female 3-inch
1	Aircraft Pressure Refueling Nozzle, D-1, with 4-inch Female Camloc
1	Case Transit, Desert, Tan
	Intermediate Case 3
1	Reducer, Male 4-inch x Female 3-inch
1	Aircraft Pressure Refueling Nozzle, D-1, with 4-inch Female Camloc
1	Case, Transit, Desert, Tan
	Intermediate Case 4
6	Reducer, Female 4-inch x Male 3-inch
1	Case, Transit, Desert, Tan
	Intermediate Case 5
1	Nozzle Assembly, Fuel and Oil Servicing, 1-inch, with Pressure Regulator
1	Ball Valve Assembly, 2-inch Quick Disconnect
1	Reducer, Female 2-inch x Male 1.5-inch
1	Case, Transit, Desert, Tan
	Intermediate Case 6
1	Nozzle Assembly, Fuel and Oil Servicing, 1-inch, with Pressure Regulator
1	Ball Valve Assembly, 2-inch Quick Disconnect
1	Reducer, Female 2-inch x Male 1.5-inch
1	Case, Transit, Desert, Tan
	Intermediate Case 7
1	Reducer, Female 4-inch x Male 2-inch
2	Nozzle Assembly, Fuel and Oil Servicing, 1.5-inch
1	Case, Transit, Desert, Tan
	Intermediate Case 8
2	Nozzle Assembly, Closed-Circuit Refueling, Standard
1	Case, Transit, Desert, Tan
	Intermediate Case 9
2	Tee Assembly, 2-inch, Valved Dry Break
1	Case, Transit, Desert, Tan
	Intermediate Case 10
1	Adapter, Female 2-inch Quick Disconnect x 2-inch Valved Dry Break
1	Adapter, Male 2-inch Quick Disconnect x 2-inch Valved Dry Break
1	Aircraft Pressure Refueling Nozzle, D-1, with 2-inch Unisex Coupling
1	Case, Transit, Desert, Tan
	Intermediate Case 11
1	Adapter, Male 2-inch Quick Disconnect x 2-inch Valved Dry Break
1	Aircraft Pressure Refueling Nozzle, D-1, with 2-inch Unisex Coupling
1	Case, Transit, Desert, Tan

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

Table 3. TRICON 3 (Components List For The 800,000 Gallon FSSP)-Continued.

QTY REQ	NOMENCLATURE OR DESCRIPTION
	Intermediate Case 12
1	Regulator, Pressure, 2-inch Female, 2-inch Unisex Outlet
1	Case, Transit, Desert, Tan

TRICON number 4 contains following components:

Table 4. TRICON 4 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
7	Hose Assembly, Discharge, 4-inch x 25-feet
5	Hose Assembly, Discharge, 6-inch x 50-feet
5	Hose Assembly, Discharge, 6-inch x 25-feet
6	Hose Assembly, Discharge, 2-inch x 50-feet, Valved Dry Break
4	Hose Assembly, Discharge, 3-inch x 50-feet
	P/O Wet Wing Defueling Assembly
9	Ground Rod Assembly, Self Driving
	(Qty 1, P/O Wet Wing Defueling Assembly, 90598/7029-100)
10	Pan, Drip
1	Container, TRICON, 8-feet x 6-feet 5 ¼- inch x 8-feet
	Intermediate Case 1
1	Extinguisher, Fire, Dry Chemical (Hand Portable)
	P/O Wet Wing Defueling Assembly 15886/301.040
1	Adapter, 4-inch Male Camloc x 3-inch Valved Dry Break
	P/O Wet Wing Defueling Assembly 15886/301.040
1	Adapter, 4-inch Female Camloc x 3-inch Valved Dry Break
	P/O Wet Wing Defueling Assembly 15886/301.040
2	Ground Wire Assembly, 100-feet
	P/O Wet Wing Defueling Assembly 15886/301.040
1	Case, Transit, Desert, Tan
	Intermediate Case 2
1	Coupling Half, Cap, Dust, 1.5-inch
2	NATO Standard Connector or Hose Unit (Female Half)
1	Case, Transit, Desert, Tan
	Intermediate Case 3
3	Adapter, Double, Male x Male, 3-inch Nominal Size
3	Adapter, Double, Male x Male, 4-inch Nominal Size
2	NATO Standard Adapter or Tank Unit (Male Half)
1	Case, Transit, Desert, Tan
	Intermediate Case 4
2	Coupling Half, Cap, Dust, 3-inch
7	Coupling Half, Dust, Plug, 4-inch
9	Coupling Half, Dust, Plug, 3-inch
1	Case, Transit, Desert, Tan

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

Table 4. TRICON 4 (Components List For The 800,000 Gallon FSSP) - Continued.

QTY REQ	NOMENCLATURE OR DESCRIPTION
	Intermediate Case 5
4	Coupling Half, Cap Dust, 4-inch
7	Coupling Half, Cap, Dust, 3-inch
1	Case, Transit, Desert, Tan
	Intermediate Case 6
1	Coupling Set, Tank Truck, NATO
1	Case, Transit, Desert, Tan
	Intermediate Case 7
6	Splice, Discharge Hose, 4-inch
	P/O Hose Repair Kit
2	Splice, Discharge Hose, 3-inch
	P/O Hose Repair Kit
1	Case, Transit, Desert, Tan
	Intermediate Case 8
4	Spice, Discharge Hose, 4-inch
	P/O Hose Repair Kit
3	Splice, Suction Hose, 2-inch
	P/O Hose Repair Kit
2	Splice, Suction Hose, 4-inch
	P/O Hose Repair Kit
1	Case, Transit, Desert, Tan
	Intermediate Case 9
5	Splice, Hose, 6-inch
	P/O Hose Repair Kit
1	Case, Transit, Desert, Tan
	Intermediate Case 10
1	Knife, Craftsman
	P/O Hose Repair Kit
1	Frame, Hacksaw
	P/O Hose Repair Kit
10	Blade, Hacksaw
	P/O Hose Repair Kit
1	Pliers, Needle Nose
	P/O Hose Repair Kit
1	Hammer, Nylon
	P/O Hose Repair Kit
1	Tool, Clamping
1	Screw Driver, Flat Blade
	P/O Hose Repair Kit
1	Ground, Wire, 20-feet
	P/O Hose Repair Kit
1	Case, Transit, Desert, Tan

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

Table 4. TRICON 4 (Components List For The 800,000 Gallon FSSP) - Continued.

QTY REQ	NOMENCLATURE OR DESCRIPTION
	Intermediate Case 11
5	Splice, Suction Hose, 6-inch P/O Hose Repair Kit
1	Wrench, Combination, 9/16-inch P/O Hose Repair Kit
1	Case, Transit, Desert, Tan

TRICON number 5 contains following components:

Table 5. TRICON 5 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
2	Filter Separator, Liquid Fuel, Frame Mounted, 350 GPM, Capacity
2	Spill Containment Berm, 6-feet x 8-feet x 1-foot
6	Valve Assembly, Gate, Female 4-inch x Male 4-Inch
6	Extinguisher, Fire, Dry Chemical (Hand Portable)
8	Hose Assembly, Discharge, 4-inch x 25-feet
6	Hose Assembly, Discharge, 6-inch x 10-feet
1	Hose Assembly, Discharge, 6-inch x 50-feet
1	Container, TRICON, 8-feet x 6-feet 5 ¼-inch x 8-feet
	Intermediate Case 1 - BII
4	Screwdriver, Flat Tip
4	Mallet, Rubber
1	Handle, Socket Wrench, Reversible
1	Socket, Socket Wrench, 9/16-inch
1	Wrench, Bung
1	Technical Manual for Fuel System Supply Point, 800,000 Gallon System (NSN 4930-01-545-6669)
1	Technical Manual for Filter Separator, Liquid Fuel, Frame Mounted, 350 GPM Capacity (NSN 4330-00-177-8485)
1	Technical Manual for Tank, Fabric, Collapsible, Petroleum, 5,000 Barrel
1	Technical Manual for 20’ Container Types 1, 2, 3, and 4 NSN: 8145-01-527-2880 (Type 1) 8145-01-527-3063 (Type 2) 8145-01-527-2877 (Type 3) 8145-01-527-2876 (Type 4)
1	Technical Manual for TRICON Container, Type 1, NSN 8145-01-527-2506, NSN 8145-01-527-7531, and Type 2, NSN 8145-01-526-4642, NSN 8145-01-528-7533
1	Storage and Shipping Instructions, Fuel System Supply Point (FSSP), 800,000 Gallon System, NSN 4930-01-545-6669

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

TRICON number 6 contains following components:

Table 6. TRICON 6 (Components List For The 800,000 Gallon FSSP).

QTY REQ	NOMENCLATURE OR DESCRIPTION
6	Valve Assembly, Gate, Female 6-inch x Male 6-inch
2	Tee Assembly, Female 6-inch x Female 6-inch x Male 6-inch
4	Tee Assembly, Female 6-inch x Male 6-inch x Male 6-inch
8	Hose Assembly, Discharge, 6-inch x 10-feet
8	Hose Assembly, Discharge, 6-inch x 50-feet
6	Extinguisher, Fire, Dry Chemical (Hand Portable)
1	Container, TRICON, 8-feet x 6-feet 5 ¼-inch x 8-feet

ISO number 1 contains following components:

Table 7. ISO Container 1 (Tank and Hose Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	210K
12	Hose Assembly, Suction, 6-inch x 10-feet
3	Gate Valve Assembly, 6-inch
6	Tee Assembly, Male 6-inch x Female 6-inch x Male 4-inch
1	Tee Assembly, Female 6-inch x Male 6-inch x Female 6-inch
2	Range Pole and Case
1	Range Pole Cord, 2100-feet, 550-lb Break
1	Container, Cargo, End Opening
1	Berm Liner, Fabric, 210K
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in this ISO Container:	
4	Hose, 2-inch x 8-feet
2	Hose, 6-inch x 10 feet
1	Tank Repair Kit
1	Replacement O-rings, Gaskets, and Fasteners
1	Tape Antiseize
1	Coated, Fabric
4	Valve, 2-inch, Drain Assembly
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in Container 9:	
2	Valve, 6-inch
The Following Components are supplied with the Berm Liner Fabric Collapsible Tank, 210K, stored in this ISO Container:	
4	Hose, Assembly, 10-feet x 2-inch
2	Valve Assembly, 2-inch, Cam-Loc, QD
2	Drain Assembly, 2-inch

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

ISO number 2 contains following components:

Table 8. ISO Container 2 (Tank and Hose Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Tank, Fabric, Collapsible, 5000 Barrel Fuel
10	Hose Assembly, Suction, 6-inch x 10-feet
1	Gate Valve Assembly, 6-inch
3	Tee Assembly, Male 6-inch x Female 6-inch x Male 4-inch
1	Tee Assembly, Female 6-inch x Female 6-inch x Male 6-inch
1	Tee Assembly, Female 6-inch x Female 6-inch x Male 4-inch
4	Tee Assembly, Female 6-inch x Female 6-inch x Male 6-inch
2	Range Pole and Case
1	Container, Cargo, End Opening
1	Berm Liner, Fabric, Collapsible Tank, 5000 Barrel Fuel
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in this ISO Container:	
4	Hose, 2-inch x 8-feet
2	Hose, 6-inch x 10-feet
1	Tank Repair Kit
1	Replacement O-Rings, Gaskets, and Fasteners
1	Tape, Antiseize
1	Coated, Fabric
4	Valve, 2-inch, Drain Assembly
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in Container 9:	
2	Valve, 6-inch
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in this ISO Container:	
4	Hose, Assembly, 10-feet x 2-inch
2	Valve Assembly, 2-inch, Cam-Loc, QD
2	Drain Assembly, 2-inch

ISO number 3 contains following components:

Table 9. ISO Container 3 (Tank and Hose Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Tank, Fabric, Collapsible, 5000 Barrel Fuel
12	Hose Assembly, Suction, 6-inch x 10-feet
4	Gate Valve Assembly, 6-inch
3	Tee Assembly, Female 6-inch x Male 6-inch x Female 4-inch
2	Range Pole and Case
1	Container, Cargo, End Opening
1	Berm Liner, Fabric, Collapsible Tank, 5000 Barrel Fuel

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

Table 9. ISO Container 3 (Tank and Hose Assembly) - Continued.

QTY REQ	NOMENCLATURE OR DESCRIPTION
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in this ISO Container:	
4	Hose, 2-inch x 8-feet
2	Hose, 6-inch x 10-feet
1	Tank Repair Kit
1	Replacement O-Rings, Gaskets, and Fasteners
1	Tape, Antiseize
1	Coated, Fabric
4	Valve, 2-inch, Drain Assembly
2	Valve-6-inch
The Following Components are supplied with the Berm Liner Fabric Collapsible Tank, 210K, stored in this ISO Container:	
4	Hose, Assembly, 10-feet x 2-inch
2	Valve Assembly, 2-inch, Cam-Loc, QD
2	Drain Assembly, 2-inch

ISO number 4 contains following components:

Table 10. ISO Container 4 (Tank and Hose Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Tank, Fabric, Collapsible, 5000 Barrel Fuel
12	Hose Assembly, Suction, 6-inch x 10-feet
2	Gate Valve Assembly, 6-inch
1	Tee Assembly, Male 6-inch x Female 6-inch x Male 4-inch
1	Tee Assembly, Male 6-inch x Female 6-inch x Female 4-inch
2	Range Pole and Case
1	Container, Cargo, End Opening
1	Berm Liner, Fabric, Collapsible Tank, 5000 Barrel Fuel
The Following Components are supplied with the Tank, Fabric, Collapsible, 210K, stored in this ISO Container:	
4	Hose, 2-inch x 8-feet
2	Hose, 6-inch x 10-feet
1	Tank Repair Kit
1	Replacement O-Rings, Gaskets, and Fasteners
1	Tape, Antiseize
1	Coated, Fabric
4	Valve, 2-inch, Drain Assembly
2	Valve, 6-inch
The Following Components are supplied with the Berm Liner Fabric Collapsible Tank, 210K, stored in Container 9:	
4	Hose, Assembly, 10-feet x 2-inch
2	Valve Assembly, 2-inch, Cam-Loc, QD
2	Drain Assembly, 2-inch

TRIPLE CONTAINERS (TRICON) AND INTERNATIONAL STANDARDS ORGANIZATION (ISO) CONTAINERS – CONTINUED

ISO number 5 contains following components:

Table 11. ISO Container 5 (Filter Separator and Pump Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Pumping Assembly, 600 GPM
2	Filter Separator, Liquid Fuel, Frame Mounted, 350 GPM, Capacity
3	Spill Containment Berm, 6-feet x 8-feet x 1-foot
2	Fuel Spill Containment Kit (secured to the drawbar assembly)
1	Special Tools
1	Container, Cargo, End Opening

ISO number 6 contains following components:

Table 12. ISO Container 6 (Pump and Hose Assembly).

QTY REQ	NOMENCLATURE OR DESCRIPTION
1	Pumping Assembly, 600 GPM
1	Spill Containment Berm, 6-feet x 8-feet x 1-foot
9	Hose Assembly, Discharge, 6-inch x 50-feet
2	Fuel Spill Containment Kit (secured to the drawbar assembly)
1	Container, Cargo, End Opening

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

The FSSP consists of the following major components shown on Table 13.

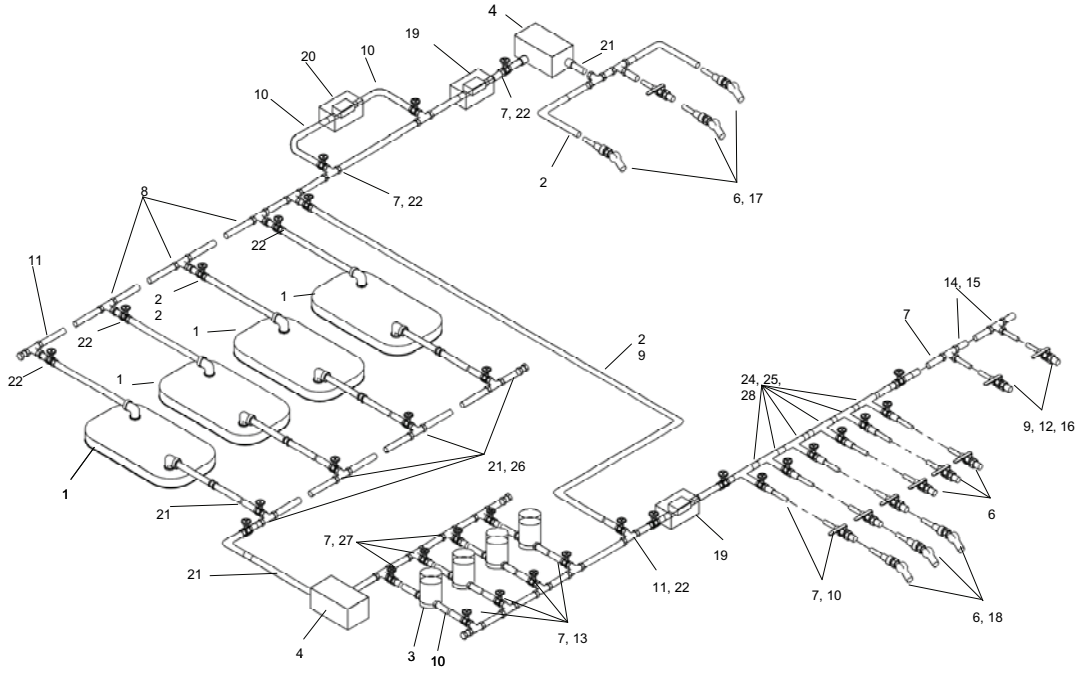


Figure 1. 800K-FSSP Fuel System Supply Point.

Table 13. FSSP Major Components List.

ITEM NO.	DESCRIPTION	QTY PER SYSTEM.
1	Tanks (210K gallon)	4
2	Hose Assembly, Suction, 4-in. x 10 ft.	22
3	Filter Separator, Frame Mounted, 350 GPM	4
4	Pumping Assembly, 600 GPM	2
5	Tee Assembly, 4F X 4M X 4F	1
6	Valve Assembly, Butterfly, 4-in. (LH-F, RH-M)	9
7	Valve Assembly, Gate 4-in.	17
8	Tee Assembly, 6F X 6M X 6M	4
9	Nozzle Assembly, D-1, with 2-inch non-valved dry break	3
10	Hose Assembly, Discharge, 4-in. x 25 ft.	17
11	Tee Assembly, 6F X 6F X 6M	17
12	Nozzle, Fuel & Oil Service 1-Inch w/ Pressure Regulator	2
13	Hose Assembly, Discharge, 6-in. x 10 ft.	26
14	Tee Assembly, 2-in. Valved Break Dry (AA59377-A2)	2
15	Hose Assembly, Discharge, 2-in X 50 ft. Valve Break Dry	6
16	Nozzle, Fuel & Oil Service, 1.5-in.	2
17	Nozzle Assembly, D-1, with 4M Cam Lock Coupling	3

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED

Table 13. FSSP Major Components List - Continued.

ITEM NO.	DESCRIPTION	QTY PER SYSTEM.
18	Nozzle Assembly, D-1, with 4F Cam Lock Coupling	3
19	Flowmeter Assembly, Inline, 6-in.	2
20	Fuel Additive Injector Assembly	1
21	Hose Assembly, Suction, 6-in. x 10 ft.	45
22	Valve Assembly, Gate, 6-IN (LH-F, RH-M)	16
23	Tee Assembly, 6M X 6F X 4F	5
24	Hose Assembly, Discharge, 6-in. x 25 ft.	5
25	Tee Assembly, 6M X 6FX 4M	10
26	Tee Assembly, 6F X 6M X 6F	4
27	Tee Assembly, 6F X 6F X 4M	1
28	Hose Assembly, Discharge, 6-in. x 50 ft.	23

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
THEORY OF OPERATION

INTRODUCTION

The FSSP is comprised of a number of separate major components to store and dispense fuel. The principles of operation of each of these major components and how they work within the system are defined in the following paragraphs. (Refer to Figure 1.)

FUEL SYSTEM SUPPLY POINT

The FSSP is used to store and dispense fuel to using units in the field. A typical layout of the 800K FSSP is shown in Figure 1. Fuel enters the FSSP through the receipt manifold (Figure 1, Item 1). The first of two 600 GPM pumps (Figure 1, Item 2) pushes the fuel through the flow meter assembly (Figure 1, Item 3), the fuel additive injection assembly (Figure 1, Item 4) and is moved into the collapsible fabric fuel tanks (Figure 1, Item 5). The operator selects the collapsible fabric fuel tank to be filled by opening and closing the appropriate gate valves. A second 600 GPM pump (Figure 1, Item 6) moves the fuel from the collapsible tanks (Figure 1, Item 5) through two or more of the four (4) filter separators (Figure 1, Item 7) and the flow meter assembly (Figure 1, Item 8). Fuel is issued through the quick acting valves and installed nozzles (Figure 1, Item 9) and the retail issue points (Figure 1, Item 10). Issue points to be used are selected by the operator by opening and closing appropriate gate valves.

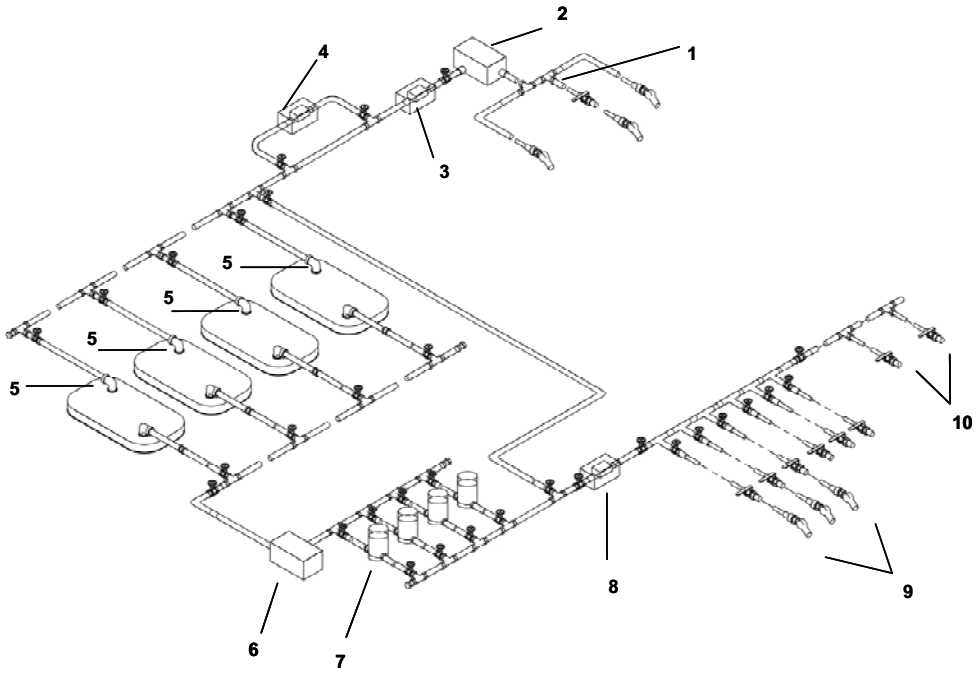


Figure 1. Operation of Fuel System Supply Point.

FUEL SYSTEM SUPPLY POINT - CONTINUED

PUMPS

A 600 GPM pump (Figure 1, Item 2) is used on the receiving side of the FSSP to move fuel into the collapsible fabric fuel tanks (Figure 1, Item 5). An identical 600 GPM pump (Figure 1, Item 6) is used on the delivery side of the FSSP to move the fuel from the tanks to the various types of dispensing units (Figure 1, Items 9 and 10).

FILTER-SEPARATOR

Four 350 GPM filter-separators (Figure 1, Item 7) will be connected parallel on the delivery side of the system to remove entrained water and solid contaminants from fuel before it is dispensed into vehicles or containers.

TANKS

Four 210K Collapsible fabric fuel tanks (Figure 1, Item 5) are used to store fuel received from fuel transporters or pipelines to be supplied to the dispensing units.

FITTINGS

There are several different types of fitting assemblies in the FSSP to connect hoses, valves and components together.

HOSE ASSEMBLIES

There are two types of hose assemblies used in the system. The suction hose assemblies have reinforcing wires spiraled throughout their length to keep the hose from collapsing and to act as a bonding wire. The discharge hose assemblies are of a non-wire reinforced type, but have bonding wires imbedded in the entire length of the assembly.

DISPENSING NOZZLES

Nozzles provide a means of refueling vehicles, refueling aircraft or filling cans and drums. The nozzles are fuel and oil servicing and automatic shutoff for use with 1.5 in. or 1 in. hose. When 1 in. nozzles are required, fittings are supplied to remove the 1.5 in. nozzles and replace them with 1 in. nozzles. Closed circuit refueling nozzles are used for refueling aircraft.

DISPENSING VALVES

Five quick acting valves are also provided for dispensing fuel to systems with various other types of fuel connections. Three sizes of quick acting valves are provided; 1.5 in., 2 in. and 3 in. When 6 in. dispensing valves are required, the 6 in to 4 in. reducer fitting on the valve can be removed as when a 4 in. dispensing valves are required, the 4 in. to 3 in. reducer fitting on the 3 in. valve can also be removed. All fuel delivery components (hoses, pump, filter, tees, elbows, nozzles, etc.) feature unisex dry-break couplings, with the exception of the valved camlock elbow couplings that connect the fuel hoses to the fuel tanks. Valved unisex couplings are dry-break fittings. They can be connected or disconnected only when the valves are closed. This allows components to be separated without spilling fuel. When connected (with valves open) the unisex couplings are locked together, preventing accidental separation.

FUEL ADDITIVE INJECTION ASSEMBLY

The fuel additive injection assembly (Figure 1, Item 4) is a fluid powered, multi-additive injection system designed to inject Fuel System Icing Inhibitor (FSII), Static Discharge Additive (SDA) and Corrosion Inhibitor (CI) additives into fuels. The system is powered and controlled by the flow of fuel and additives through the fluid motor. The system does not operate on external power or require any operators to control the system while in operation. As the flow of fuel either increases or decreases through the system, the fluid motor will either increase or decrease simultaneously.

FLOWMETER ASSEMBLY

A flowmeter assembly (Figure 1, Item 3) is used to observe the volume and quantity of fuel flowing from the receipt manifold when fuel is resupplied to the FSSP. A flowmeter assembly (Figure 1, Item 8) is used to observe the volume and quantity of fuel flowing when fuel is dispensed. When fuel flows through the flowmeter assembly the rotor is driven by the fuel passing through a vortex chamber. The volume and rate of fuel flow is transferred to a readout device through the use of a magnetic coupling.

END OF WORK PACKAGE

CHAPTER 2

OPERATOR INSTRUCTIONS
FOR
800K FUEL SYSTEM SUPPLY POINT (FSSP)

OPERATOR MAINTENANCE
DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

FUEL SYSTEM SUPPLY POINT CONTROLS AND INDICATORS (OVERVIEW)

GENERAL

The Fuel System Supply Point (FSSP) is designed for operation under a wide range of climatic conditions. Operators must be aware of any peculiarities or operational limitations for this specific installation of the FSSP. Before setting up and operating this system, ensure that the type of terrain and climate in which the system will be used will match existing needs.

OPERATOR CONTROLS AND INDICATORS

There are only a few components in the FSSP system that has operator controls and indicators for the portion of the system covered in this manual. For controls and indicators applicable to tanks, fuel additive injector, pumps and filter-separators, refer to that component's Technical Manual.

FLOWMETER ASSEMBLY REGISTER READOUT CONTROLS AND INDICATORS

Table 1 describes the controls and indicators for the flowmeter assembly register readout.

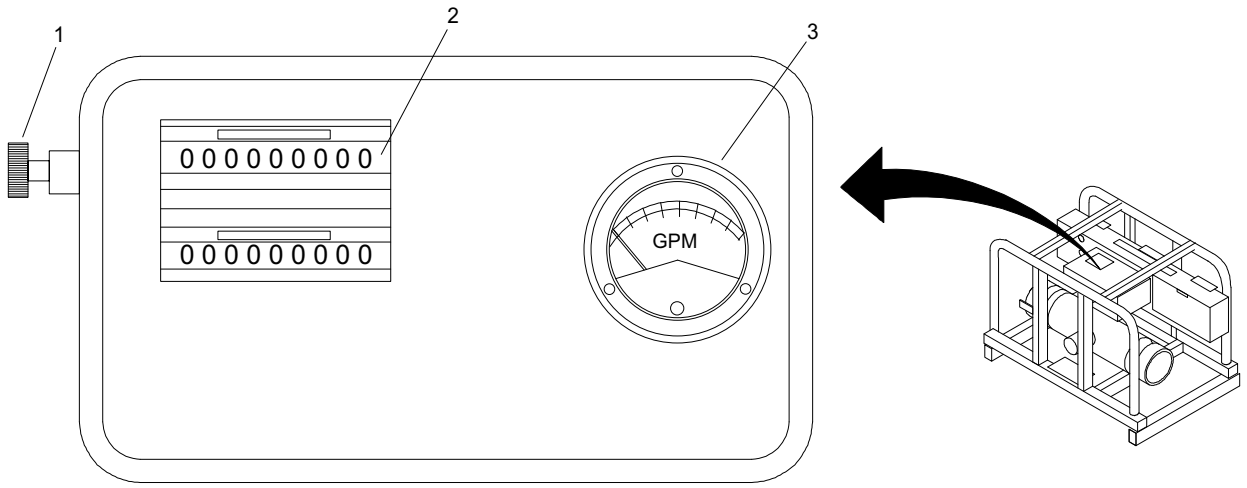


Figure 1. Flowmeter Assembly Register Readout Controls and Indicators.

Table 1. Flowmeter Assembly Register Readout Controls and Indicators.

KEY	CONTROL/INDICATOR	FUNCTION
1	Reset Knob	Used to reset top counter.
2	Dual 9-digit Counter	Used to observe quantity of fuel pumped. Top counter is resettable. Bottom counter is cumulative counter.
3	Rate of Flow Indicator	Used to observe rate of flow.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
OPERATION UNDER USUAL CONDITIONS – PREPARATION FOR USE

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required
Petroleum Supply Specialist 92F (16)

Materials/Parts
Apron, utility (WP 0165, Item 2)
Tape, teflon (WP 0165, Item 13)

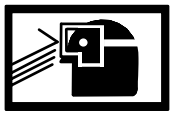
References
FM 10-67-1
TM 10-5430-239-12&P
TM 10-4330-235-13&P

ASSEMBLE FSSP

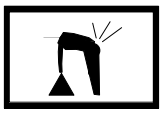
INSTALL TANKS

WARNING


CHEMICAL


EYE PROTECTION


HEAVY PARTS


HEAVY OBJECTS

When lifting 6 inch hoses, a two-man lift is required to avoid injury to personnel.

A I N

Suction hoses shall not be used at the discharge end of 600 GPM pumps, with the exception to the suction hose, which is delivered as part of the tank system, may be connected directly to the tank receipt elbow.

A I N

Pallets are fabricated from Polyethylene and should not be exposed to direct sunlight in high heat for extended periods. Return pallets to TRICONs after pallet is unloaded.

A I N

Absorbent material should not be exposed to direct sunlight for extended periods, it will break down. Store in empty TRICON when not in use.

N

Ensure all dust caps and plugs remain in place on components, hoses and fittings until they are connected to the system.

INSTALL TANKS – CONTINUED

N

Return any unloaded pallet to its original location in TRICON and secure using (2) straps in an “X” configuration across the top of pallet. Failure to do so could result in a temporary warping of the pallet.

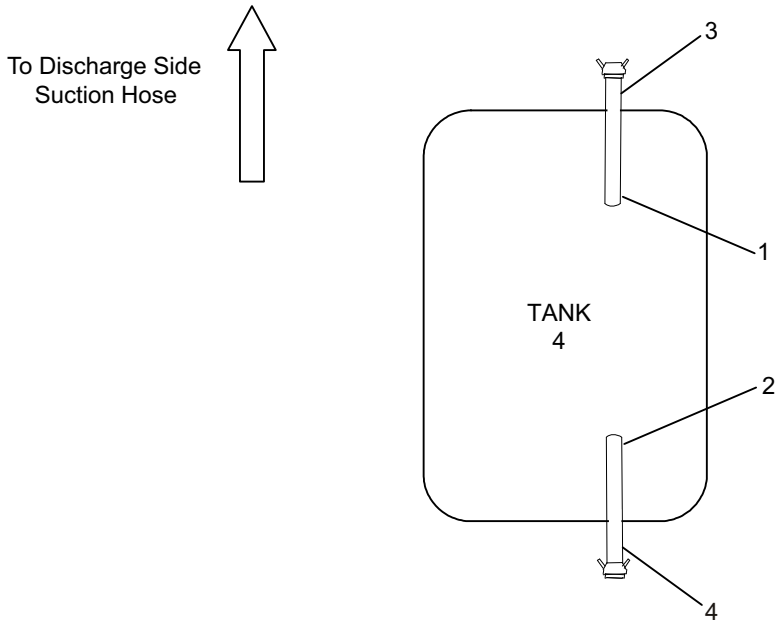


Figure 1. Fuel Tank.

N

Prior to removing tanks and pumps from containers refer to shipping and storage instructions for proper handling procedures. Ensure bag is properly placed on berm before unfolding. Refer to folding procedures in SSI.

1. Remove one fuel tank, fuel tank liner and two tank suction hoses from ISO containers 1, 2, 3 or 4.
2. Position tank liner inside the berm.
3. Inspect the liner for cuts, tears and snags.
4. Remove the tank water drain hoses from ISO containers 1, 2, 3 and 4.

N

Ensure/verify elbow is properly connected to each bag.

5. Install the water drain hose on the tank. (Refer to TM 10-5430-239-12&P)
6. Position fuel tank on fuel tank liner.
7. Inspect tank for cuts, tears and snags as it is laid out.

INSTALL TANKS – CONTINUED

A I N

Ensure suction hoses are the ones that come with BFTAs. Tank suction hoses have two camlock arms instead of four. Failure to use proper hoses could result in equipment damage.

8. Connect tank suction hoses (Figure 1, Items 3 and 4) to the tank receipt and discharge elbows (Figure 1, Items 1 and 2).
9. Perform steps 1-8 for the remaining three tanks.

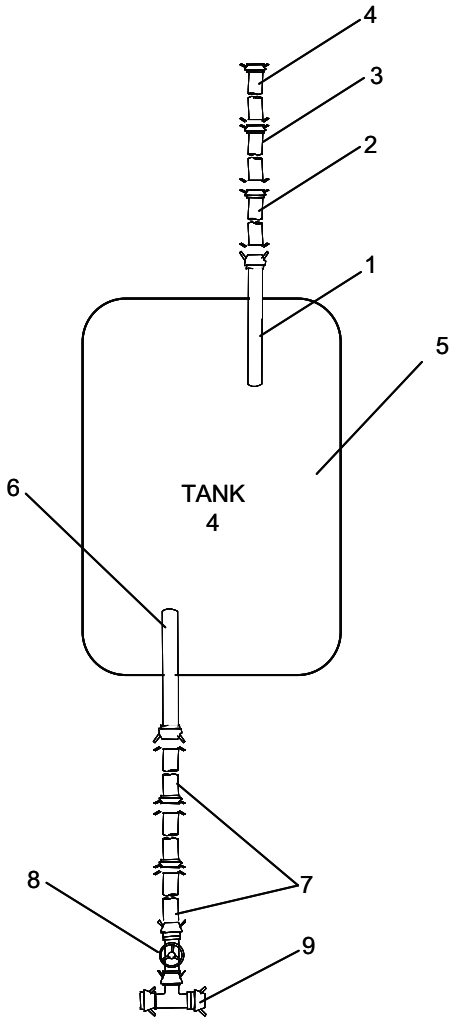


Figure 2. Fuel Tank Receipt Side Components.

10. Remove three 6 in. x 10 ft. suction hoses from ISO container 1, 2, 3 or 4.
11. Install the three 6 in. x 10 ft. suction hose (Figure 2, Item 2), (Figure 2, Item 3) and (Figure 2, Item 4) on the discharge side of the fuel tank suction hose (Figure 2, Item 1).

INSTALL TANKS – CONTINUED

12. Remove three 6 in. x 10 ft. discharge hoses from TRICON containers 1, 2, 3, 4, and 6.
13. Connect the three sections of 6 in. x 10 ft. discharge hose (Figure 2, Item 7) to the tank hose (Figure 2, Item 6) on the receipt side of the of the fuel tank (Figure 2, Item 5).
14. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
15. Connect the 6 in. gate valve (Figure 2, Item 8) to the end of the three sections of 6 in. x 10 ft. discharge hose (Figure 2, Item 7).
16. Remove a 6 in. female x 6 in. female x 6 in. male tee assembly from TRICON container 6.

A I N

To properly place tee valve assemblies throughout the system the first number is the direction of the flow of the product. The second number is the outlet of the flow of the product and third number illustrates the branch of the tee valve assembly.

17. Connect the 6 in. the gate valve (Figure 2, Item 8) to the 6 in. female x 6 in. male x 6 in. male tee assembly (Figure 2, Item 9) on the receipt side of the fuel tank (Figure 2, Item 5).

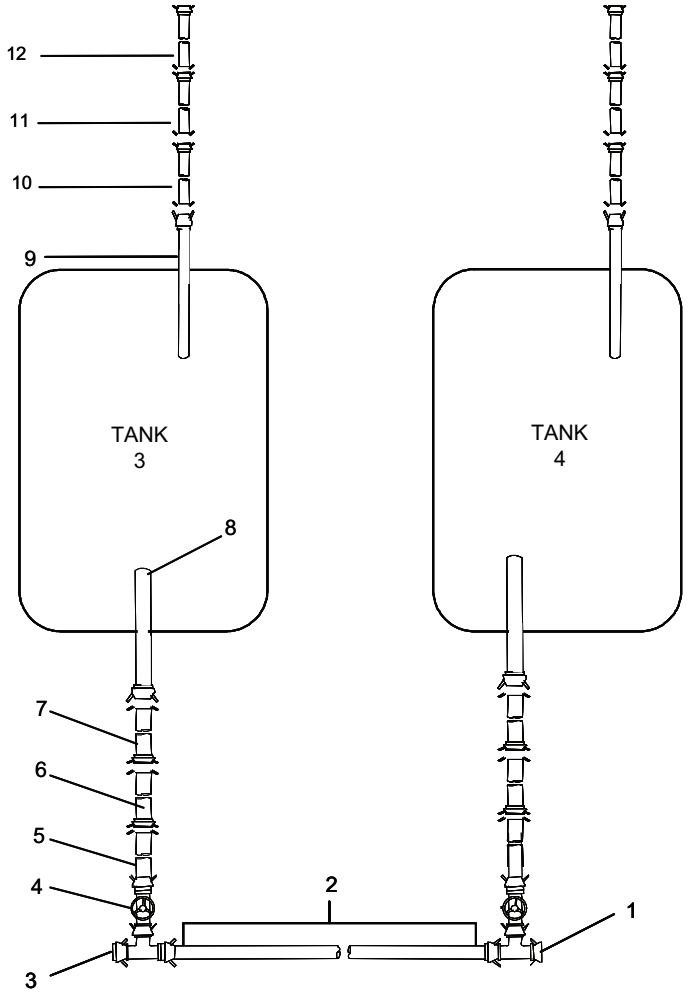


Figure 3. Fuel Tank Receipt Components Between Tanks.

INSTALL TANKS - CONTINUED

18. Remove two sections of 6 in. x 50 ft. discharge hose from TRICON containers 4, 5 6 and ISO container 6.
19. Connect the two sections of 6 in. x 50 ft. discharge hose together (Figure 3, Item 2).
20. Connect two sections of the 6 in. x 50 ft. discharge hose (Figure 3, Item 2) to the 6 in. female x 6 in. female x 6 in. male tee assembly (Figure 3, Item 1).
21. Remove one 6 in. female x 6 in. male x 6 in. male tee assembly from TRICON container 6.
22. Connect end of 6 in. x 50 ft. discharge hose (Figure 3, Item 2) to the 6 in. female x 6 in. male x 6 in. male tee assembly (Figure 3, Item 3).
23. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
24. Connect the 6 in. gate valve (Figure 3, Item 4) to the 6 in. female x 6 in. male x 6 in. male tee assembly (Figure 3, Item 3).
25. Remove three sections of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5, and 6.
26. Connect the three sections of 6 in. x 10 ft. discharge hose (Figure 3, Items 5, 6 and 7) together.
27. Connect one section of 6 in. x 10 ft. discharge hose (Figure 3, Item 5) to 6 in. gate valve (Figure 3, Item 4).
28. Connect the second and third section of discharge hose (Figure 3, Items 6 and 7) to the tank hose (Figure 3, Item 8).
29. Remove three 6 in. x 10 ft. suction hoses from ISO containers 1, 2, 3 and 4.
30. Connect the two 6 in. x 10 ft. suction hoses (Figure 3, Items 9 and 10) together.
31. Install the two 6 in. x 10 ft. suction hoses (Figure 3, Items 9, 10, 11 and 12) on the discharge side of the fuel tank suction hose (Figure 3, Item 9).
32. Perform steps 18-31 for the remaining two tanks.

END OF TASK

INSTALL RECEIPT LINE, FUEL ADDITIVE INJECTOR ASSEMBLY, FLOW METER, AND RECEIVING PUMP

INSTALL RECEIPT LINE

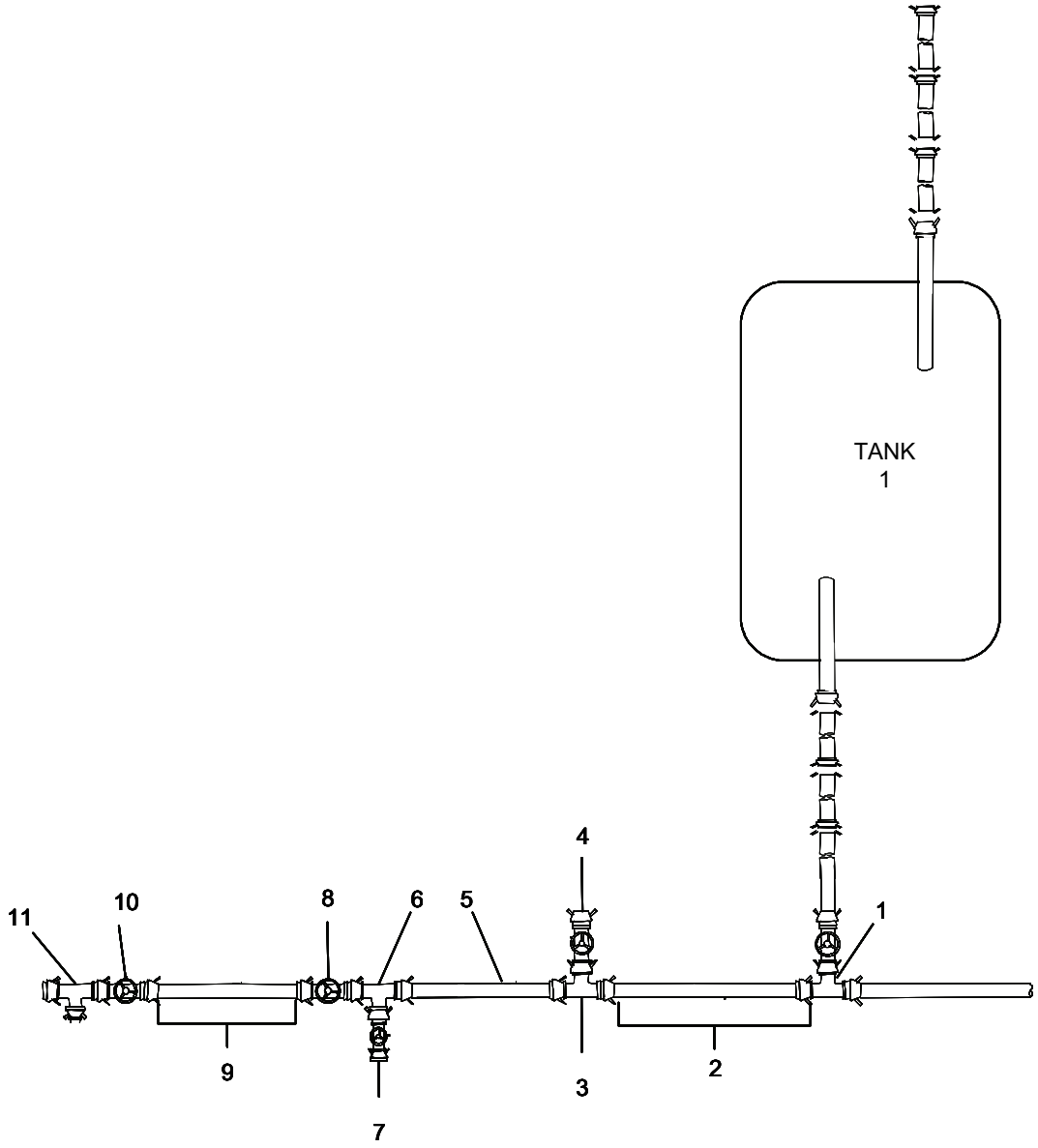


Figure 4. Installation Receipt Line.

1. Remove two sections of 6 in. x 50 ft. discharge hose from TRICON containers 1, 4, 6, and ISO container 6.
2. Connect the two sections of discharge hose (Figure 4, Item 2) to the 6 in. female x 6 in. male x 6 in. male tee assembly (Figure 4, Item 1) from tank.
3. Remove a 6 in. female x 6 in. male x 6 in. male tee assembly TRICON container 6.
4. Connect the end of the discharge hose (Figure 4, Item 2) to the 6 in. female x 6 in. male x 6 in. male tee assembly (Figure 4, Item 3).
5. Remove one 6 in. gate valve assembly from TRICON container 6 or ISO containers 1, 2, 3, and 4.

INSTALL RECEIPT LINE - CONTINUED

6. Connect the 6-inch gate valve (Figure 4, Item 4) to the male port of the tee assembly (Figure 4, Item 3).
7. Remove one section of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5, and 6.
8. Connect the section of discharge hose (Figure 4, Item 5) to the tee valve assembly (Figure 4, Item 3) pointing towards the pumping assembly.
9. Remove one 6 in. male x 6 in. female x 4 in. female tee assembly from ISO containers 2 or 4.
10. Connect the female end of the 6 in. x 10 ft discharge hose (Figure 4, Item 5) to the 6 in. male x 6 in. female x 4 in. female tee valve assembly (Figure 4, Item 6).
11. Remove one 4 in. gate valve from TRICON containers 2, 3, or 5.
12. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
13. Connect the 4 in. gate valve (Figure 4, Item 7) to the tee assembly (Figure 4, Item 6) towards the fuel additive injector.
14. Connect the 6 in. gate valve (Figure 4, Item 8) to tee assembly (Figure 4, Item 6).
15. Remove four sections of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.
16. Connect the four sections of discharge hose (Figure 4, Item 9) together.
17. Connect the four sections of discharge hoses (Figure 4, Item 9) to the gate valve (Figure 4, Item 8).
18. Remove an additional 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
19. Connect 6 in. gate valve (Figure 4, Item 10) to discharge hoses (Figure 4, Item 9).
20. Remove a 6 in. male x 6 in. female x 4 in. male tee valve from ISO container 1, 2, or 4.
21. Connect the tee assembly (Figure 4, Item 11) to the gate valve (Figure 4, Item 10).

END OF TASK

INSTALL FUEL ADDITIVE INJECTOR ASSEMBLY

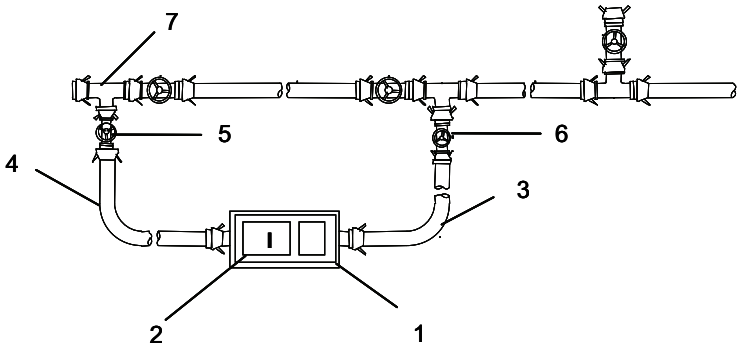


Figure 5. Installation of Fuel Additive Injector Assembly.

1. Remove the fuel additive injector assembly and spill containment berm (Figure 5, Item 2) from TRICON container 2.
2. Place the spill containment berm (Figure 5, Item 2) on the ground where the fuel additive injector assembly (Figure 5, Item 1) is to be placed.
3. Using a forklift, place the fuel additive injector assembly (Figure 5, Item 1) in the spill containment berm.
4. Remove two sections of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
5. Connect one section of the 4 in. x 25 ft. discharge hose (Figure 5, Item 3) to the 4 in. gate valve assembly (Figure 5, Item 6) leading towards the outlet port of the fuel additive injector (Figure 5, Item 1).
6. Connect the other end of the 4 in. x 25 ft. discharge hose (Figure 5, Item 3) to the injector (Figure 5, Item 1).
7. Ground the fuel additive injector assembly (Figure 5, Item 1) with supplied ground rod according to FM 10-67-1 and fuel additive injector assembly TM 10-4930-364-13&P.
8. Connect the second 4 in. x 25 ft. hose (Figure 5, Item 4) to the inlet port of the injector (Figure 5, Item 1).
9. Remove one 4 in. gate valve from TRICON containers 2, 3, or 5.
10. Connect the 4 in. gate valve (Figure 5, Item 5) to the other end of the discharge hose (Figure 5, Item 4).
11. Connect the 4 in. gate valve (Figure 5, Item 5) to the tee assembly (Figure 5, Item 7).

END OF TASK

INSTALL FLOWMETER

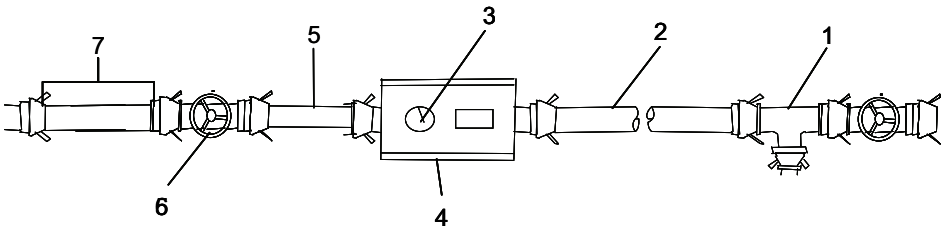


Figure 6. Installation of Flowmeter Connections.

1. Remove two sections of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.
2. Connect one section of discharge hose (Figure 6, Item 2) to the tee assembly (Figure 6, Item 1).

N

Flow meter must be registered with TMDE IAW AR 710-2 for annual calibration scheduling prior to initial installation.

3. Remove the 4 x 4 x 1 ft. spill containment berm and flowmeter from TRICON container 1.
4. Position the spill containment berm (Figure 6, Item 4) on the ground adjacent to the end of the 6 in. x 10 ft. discharge hose (Figure 6, Item 2).
5. Place the flowmeter (Figure 6, Item 3) in the spill containment berm (Figure 6, Item 4).
6. Connect the other section of 6 in. x 10 ft. discharge hose (Figure 6, Item 2) to flowmeter (Figure 6, Item 3).
7. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
8. Connect the gate valve (Figure 6, Item 6) to one end of the 6 in. x 10 ft. discharge hose (Figure 6, Item 5) and the other end of the hose to the input end of the flow meter (Figure 6, Item 3).
9. Ground the flowmeter (Figure 6, Item 3).
    a. Remove the ground rod assembly from the ground rod box on the flow meter assembly (Figure 6, Item 3).
    b. Install the ground rod per FM 10-67-1.
    c. Attach ground cable clamps to the flowmeter assembly (Figure 6, Item 3).
10. Remove one section of 6 in. x 10 ft. discharge hose from ISO containers 1, 2, 3, 5 or 6.
11. Connect the section of discharge hose (Figure 6, Item 7) to the gate valve (Figure 6, Item 6).

END OF TASK

INSTALL 600 GPM PUMPING ASSEMBLY

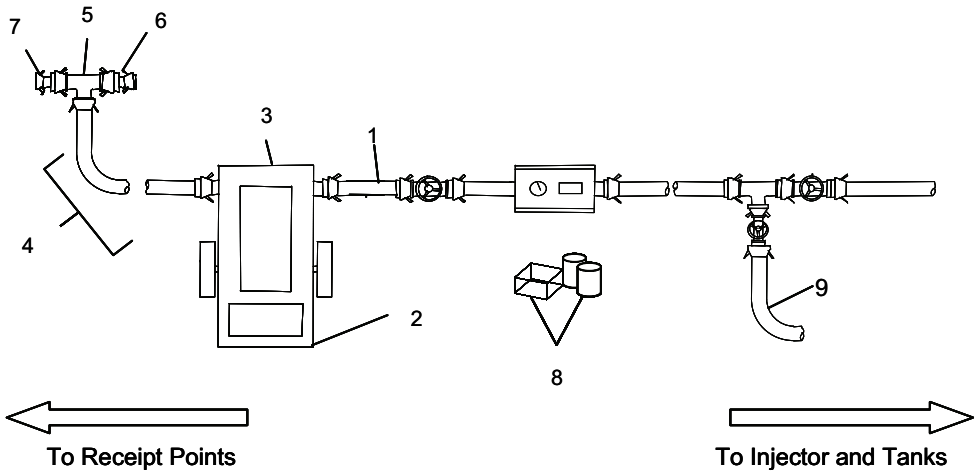


Figure 7. Installation of 600 GPM Pumping Assembly.

1. Remove the 6 x 8 x 1 ft. spill containment berm from ISO containers 1 and 2 or ISO containers 5 and 6.

N

Refer to shipping and storage instructions for removal of 600 GPM pumping assembly.

2. Remove the 600 GPM pumping assembly from ISO container 6.
3. Position the spill containment berm (Figure 7, Item 2) adjacent to the end of the two sections of 6 in. x 10 ft. discharge hose (Figure 7, Item 1).
4. Position the 600 GPM pumping assembly (Figure 7, Item 3) in the spill containment berm (Figure 7, Item 2). Place chalk, wheel-track to secure tires. Engage brake system.
5. Install the ground rod supplied with pumping assembly to ground the 600 GPM pumping assembly per FM 10-67-1 and applicable 600 GPM pumping assembly TM.
6. Place one Spill Control Kit and two drums (Figure 7, Item 8) found in TRICON container 2 and center between 600 GPM pumping assembly (Figure 7, Item 3) and injector assembly 4 in. x 25 ft. discharge hose (Figure 7, Item 9).
7. Connect the sections of 6 in. x 10 ft. discharge hose (Figure 7 Item 1) to the 600 GPM pumping assembly (Figure 7, Item 3).
8. Remove two sections of 6 in. x 10 ft. suction hose from ISO containers 1, 2, 3, and 4.
9. Connect the two sections of 6 in. x 10 ft. suction hose (Figure 7, Item 4) to the suction port of the 600 GPM pumping assembly (Figure 7, Item 3).
10. Remove a 6F x 6F x 6M tee valve assembly from TRICON container 6.
11. Connect the 6F x 6F x 6M tee valve assembly (Figure 7, Item 5) to the end of the 6 in. x 10 ft. suction hose (Figure 7, Item 4).
12. Remove two 4F x 6M adapters from TRICON container 1.
13. Connect the two 4F x 6M adapters (Figure 7, Items 6 and 7) to the 6F x 6M x 6F tee valve (Figure 7, Item 5).

END OF TASK

INSTALL COMPONENTS IN THE RECEIPT AREA

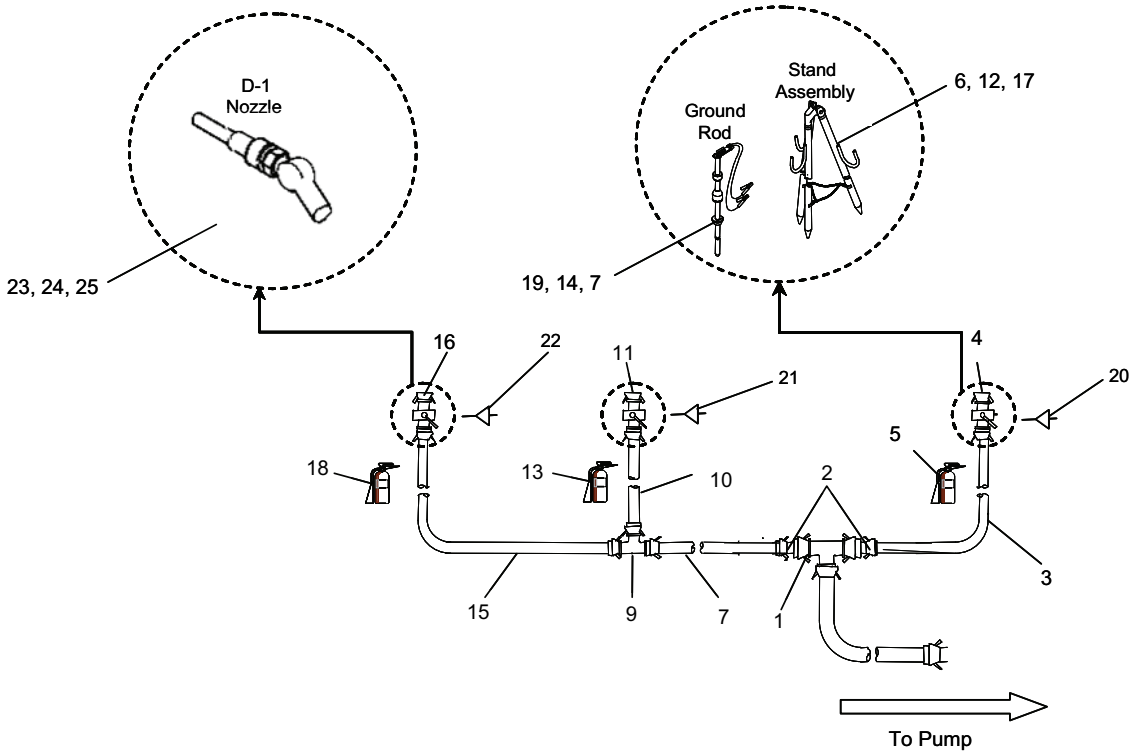


Figure 8. Installation of FSSP Components in Receipt Area.

1. Remove 22 sections of 4 in. x 10 ft. suction hose from TRICON container 1.
2. Connect seven hoses (Figure 8, Item 3) towards the receiving point on the right side of 6F x 6M x 6F tee valve (Figure 8, Item 1) and the 4F x 6M adapter (Figure 8, Item 2).
3. Remove ground rod, fire extinguisher, butterfly valve, D-1 nozzle, inline strainer and stand assembly from TRICON container 1.
4. Install the butterfly valve (Figure 8, Item 4) on the end of the seven sections of the 4 in. X 10 ft. suction hose (Figure 8, Item 3).
5. Connect the inline strainer (Figure 8, Item 20) to the butterfly valve (Figure 8, Item 4).
6. Connect D-1 (Figure 8, Item 23) to the inline strainer (Figure 8, Item 20).
7. Position the stand assembly (Figure 8, Item 6) and fire extinguisher (Figure 8, Item 5) adjacent to the butterfly valve (Figure 8, Item 4).
8. Install the ground rod (Figure 8, Item 7) adjacent to the stand assembly (Figure 8, Item 6) per FM 10-67-1.
9. Connect one suction hose 4 in. x 10 ft. (Figure 8, Item 8) to the 4F x 6M adapter (Figure 8, Item 2).
10. Remove a 4F x 4M x 4F tee valve assembly from TRICON container 1.
11. Connect the 4F x 4M x 4F tee valve assembly (Figure 8, Item 9) to the suction hose (Figure 8, Item 8).

INSTALL COMPONENTS IN THE RECEIPT AREA-CONTINUED

12. Connect another seven sections of 4 in. x 10 ft. suction hose (Figure 8, Item 10) to the 4F x 4M x 4F tee valve assembly (Figure 8, Item 9).
13. Remove ground rod, fire extinguisher, butterfly valve, inline strainer, D-1 nozzle and stand assembly from TRICON container 1.
14. Install the butterfly valve (Figure 8, Item 11) on the end of the seven sections of the 4 in. x 10 ft. suction hose (Figure 8, Item 10).
15. Connect the inline strainer (Figure 8, Item 21) to the butterfly valve (Figure 8, Item 11).
16. Connect the D-1 nozzle (Figure 8, Item 24) to the inline strainer (Figure 8, Item 21).
17. Position the stand assembly (Figure 8, Item 12) and fire extinguisher (Figure 8, Item 13) adjacent to the butterfly valve (Figure 8, Item 11).
18. Install the ground rod (Figure 8, Item 14) adjacent to the stand assembly (Figure 8, Item 12) per FM 10-67-1.
19. Connect the final seven sections of 4 in. x 10 ft. suction hose (Figure 8, Item 15) to the female port of the 4F x 4M x 4F tee valve assembly (Figure 8, Item 9).
20. Remove ground rod, fire extinguisher, butterfly valve, D-1 nozzle, inline strainer and stand assembly from TRICON container 1.
21. Install the butterfly valves (Figure 8, Item16) on the end of the sections of 4 in. x 10 ft. suction hose (Figure 8, Item 15).
22. Connect the inline strainer (Figure 8, Item 22) to the butterfly valve (Figure 8, Item 16).
23. Position the stand assembly (Figure 8, Item 17) and fire extinguisher (Figure 8, Item 18) adjacent to the butterfly valve (Figure 8, Item 16).
24. Install ground rod (Figure 8, Item 19) adjacent to the stand assembly (Figure 8, Item 17) per FM 10-67-1.

END OF TASK

INSTALL OUTGOING TANK SUCTION HOSES

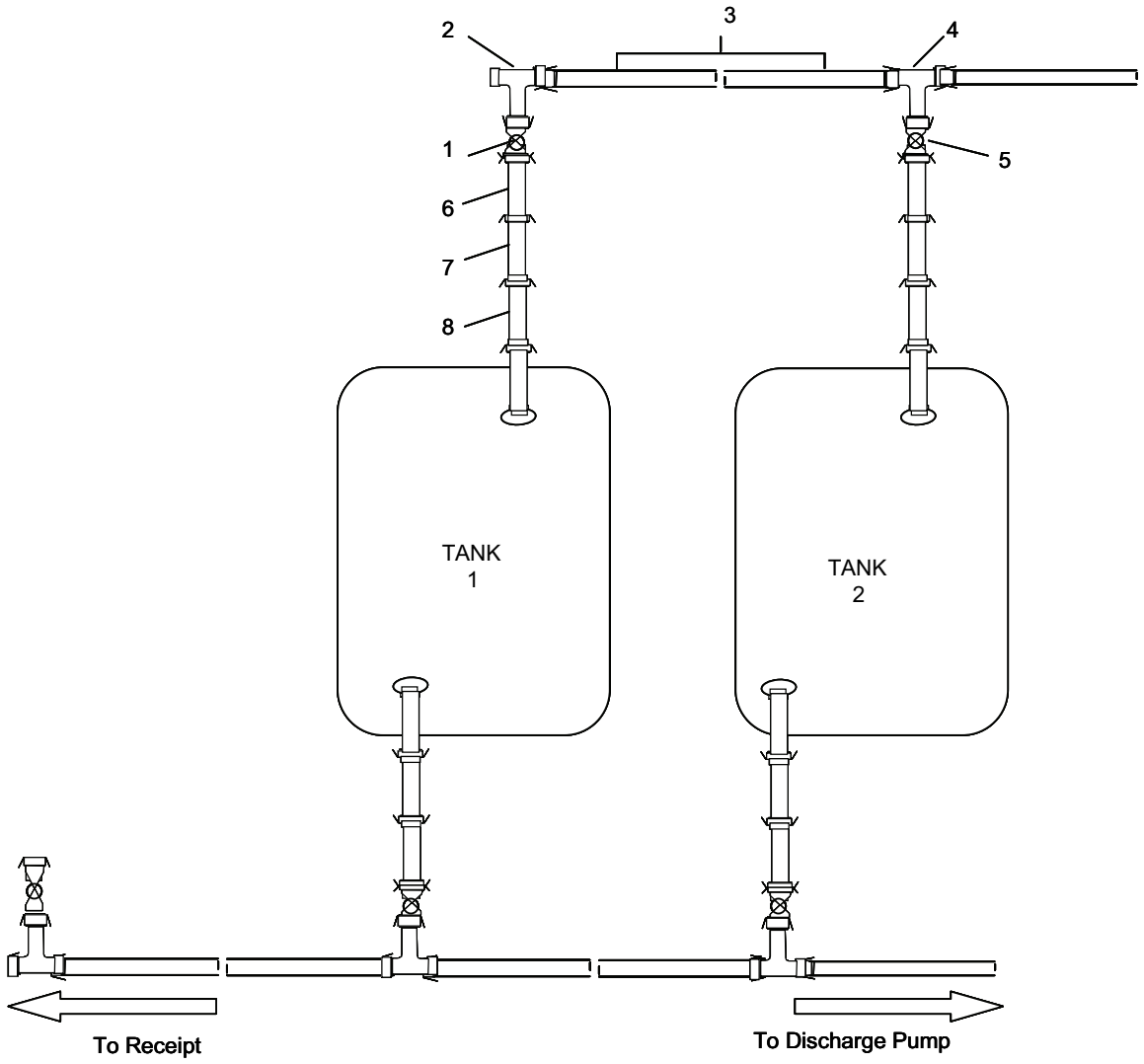


Figure 9. Installation of Outgoing Tank Suction Hoses.

1. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
2. Connect the gate valve (Figure 9, Item 1) to the 6 in. x 10 ft. suction hoses (Figure 9, Items 6, 7 and 8).
3. Remove one 6F x 6M x 6F tee assembly from ISO containers 1, 2, or 3.
4. Connect the tee assembly (Figure 9, Item 2) to the gate valve (Figure 9, Item 1).
5. Remove ten sections of 6 in. x 10 ft. suction hose from ISO containers 1, 2, 3 or 4.
6. Connect the ten sections of 6 in. x 10 ft. suction hose (Figure 9, Item 3) to the end of the tee assembly (Figure 9, Item 2) towards the discharge 600 GPM pumping assembly.
7. Remove another 6F x 6M x 6F tee assembly from ISO containers 1, 2 or 3.
8. Connect the tee assembly (Figure 9, Item 4) to the ten sections of 6 in. x 10 ft. suction hose (Figure 9, Item 3).

INSTALL OUTGOING TANK SUCTION HOSES - CONTINUED

9. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3 or 4.
10. Connect the gate valve (Figure 9, Item 5) to the 6F x 6M x 6F tee assembly (Figure 9, Item 4).
11. Connect the gate valve (Figure 9, Item 5) to the 6 in. x 10 ft. suction hoses on tank.
12. Perform steps 5 through 11 for the remaining two tanks.

END OF TASK

INSTALL DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE

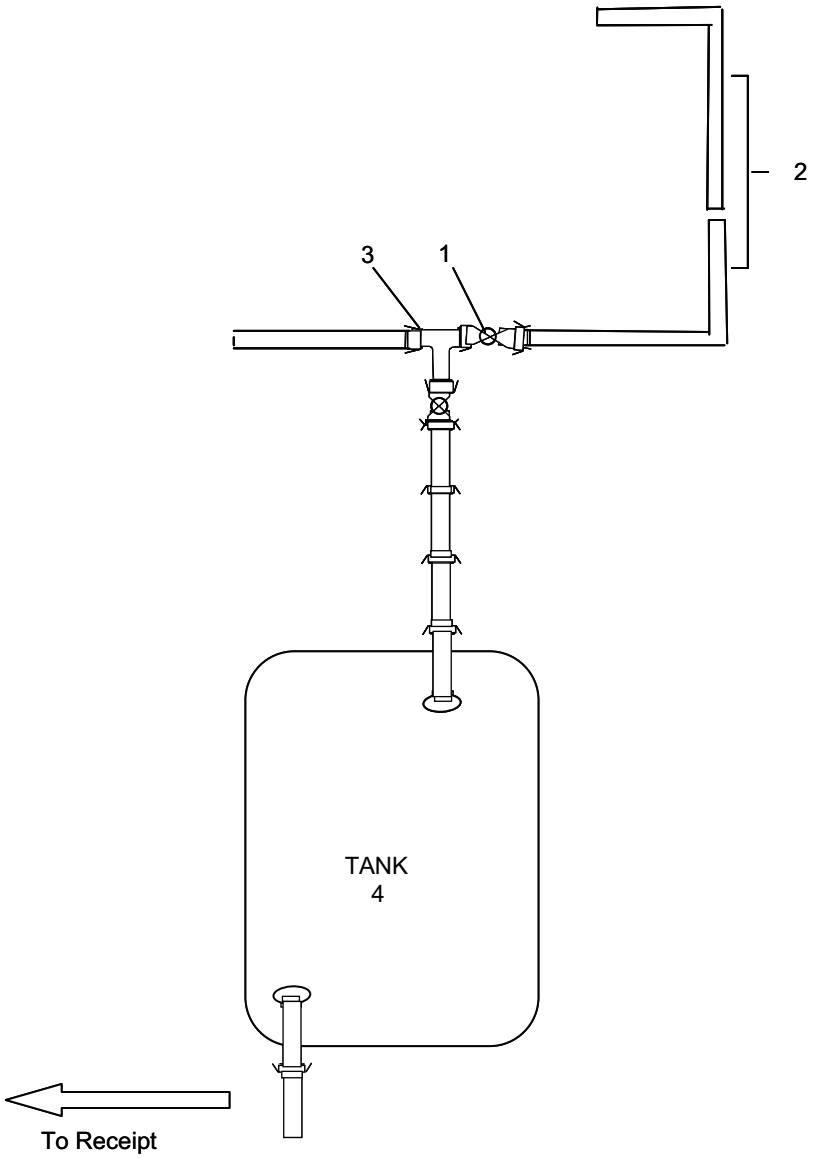


Figure 10. Connection of 600 GPM Pumping Assembly.

1. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3 or 4.
2. Connect gate valve (Figure 10, Item 1) to the 6F x 6M x 6F tee assembly (Figure 10, Item 3) of the last tank.

INSTALL DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE-CONTINUED

3. Remove five sections of suction hose 6 in. x 10 ft. from ISO containers 1, 2, 3 or 4.
4. Connect the five sections of 6 in. x 10 ft. suction hose (Figure 10, Item 2) to gate valve (Figure 10, Item 1).

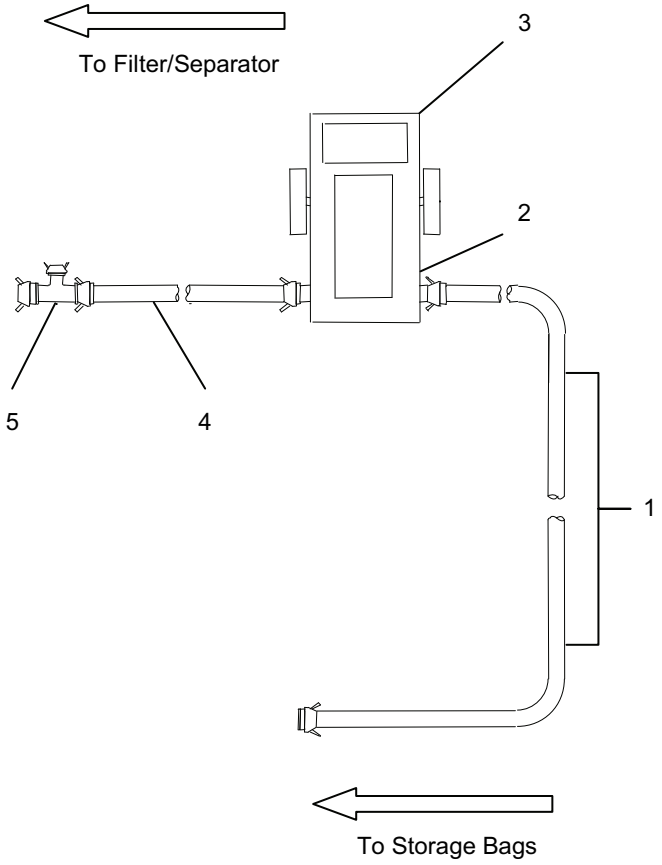


Figure 11. Connection of 600 GPM Pumping Assembly.

5. Remove a 6 x 8 x 1 ft. spill containment berm from TRICON container 1or 2 or ISO containers 5 and 6.

N

Refer to shipping and storage instructions for removal of 600 GPM pumping assembly.

6. Remove a 600 GPM pumping assembly from ISO container 5.
7. Position the spill containment berm (Figure 11, Item 2) adjacent to the end of the five sections of 6 in. x 10 ft. suction hose (Figure 11, Item 1).
8. Position the 600 GPM pumping assembly (Figure 11, Item 3) in the spill containment berm.
9. Install the ground rod supplied with pumping assembly to ground the 600 GPM pumping assembly per FM 10-67-1 and per applicable 600 GPM pump assembly TM.

INSTALL DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE-CONTINUED

10. Connect the five sections of 6 in. x 10 ft. suction hose (Figure 11, Item 1) to the suction side of the 600 GPM pumping assembly (Figure 11, Item 3).
11. Remove one section of 6 in. x 50 ft. discharge hose from TRICON containers 4, 5, 6 or ISO container 6.
12. Connect the one section of 6 in. x 50 ft. discharge hose (Figure 11, Item 4) to the discharge side of the 600 GPM pumping assembly (Figure 11, Item 3).
13. Remove one 6M x 6F x 4M tee assembly from ISO container 1, 2 or 3.
14. Connect the one section of 6 in. x 50 ft. discharge hose (Figure 11, Item 4) to the 6M x 6F x 4M tee assembly (Figure 11, Item 5).

END OF TASK

INSTALL FILTER-SEPARATOR

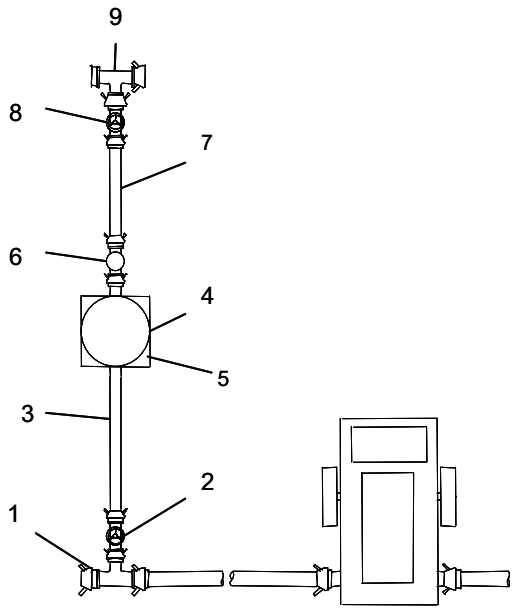


Figure 12. Installation of Filter-Separators.

1. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
2. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
3. Connect gate valve (Figure 12, Item 2) to 6M x 6F x 4M tee assembly (Figure 12, Item 1).
4. Connect the 4 in. x 25 ft. discharge hose (Figure 12, Item 3) to gate valve (Figure 12, Item 2).

N

Refer to SSI for removal of the filter-separators.

5. Remove one filter-separator from ISO container 5.
6. Remove one spill berm from ISO container 5.
7. Place filter-separator (Figure 12, Item 4) into the spill berm (Figure 12, Item 5).

INSTALL FILTER-SEPARATOR-CONTINUED

8. Ground filter-separator (Figure 12, Item 4) per Chapter 2 in FM 10-67-1.
9. Connect the male end of the 4 in. x 25 ft. discharge hose (Figure 12, Item 3) to the filter-separator (Figure 12, Item 4).
10. Remove the sampling probe adapter from side of the filter-separator (Figure 12, Item 4).
11. Connect sampling probe adapter (Figure 12, Item 6) to the filter-separator (Figure 12, Item 4).
12. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
13. Connect the 4 in. x 25 ft. discharge hose (Figure 12, Item 7) to the sampling probe adapter (Figure 12, Item 6).
14. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
15. Remove one 6M x 6F x 4F tee assembly from ISO containers 2 or 4.
16. Connect the 4 in. gate valve (Figure 12, Item 8) to the 4 in. x 25 ft. discharge hose (Figure 12, Item 7).
17. Connect the 6M x 6F x 4F tee assembly (Figure 12, Item 9) to the 4 in. gate valve (Figure 12, Item 7).
18. Remove one 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.

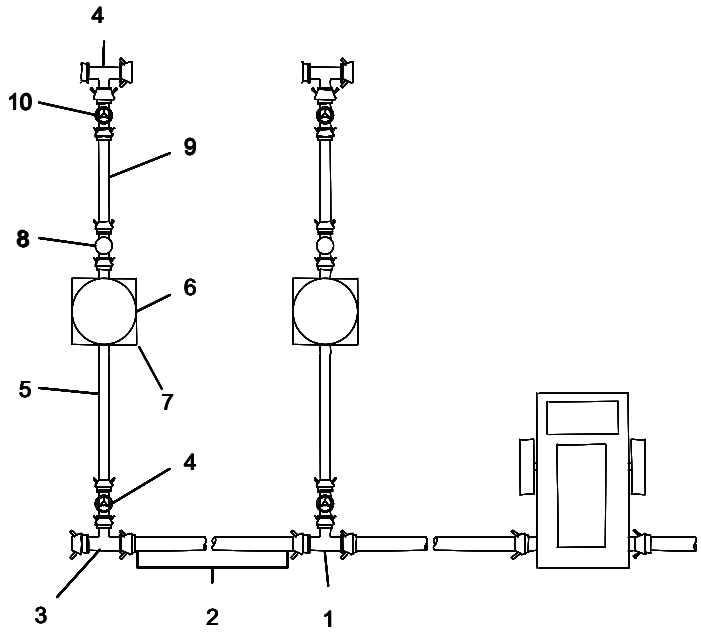


Figure 13. Installation of Filter-Separators.

19. Connect the 6 in. x 10 ft. discharge hose (Figure 13, Item 2) to the 6M x 6F x 4M tee assembly (Figure 13, Item 1).
20. Remove one 6M x 6F x 4M tee assembly from ISO containers 1, 2 or 4.
21. Connect the 6 in. x 10 ft. discharge hose (Figure 13, Item 2) to the 6M x 6F x 4F tee assembly (Figure 13, Item 3).
22. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
23. Connect gate valve (Figure 13 Item 4) to the 6M x 6F x 4M tee assembly (Figure 13, Item 3).
24. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
25. Connect the 4 in. x 25 ft. discharge hose (Figure 13, Item 5) to the 4 in. gate valve (Figure 13, Item 4).

INSTALL FILTER-SEPARATOR-CONTINUED

26. Remove one filter-separator from ISO container 5.
27. Remove one spill berm from ISO container 5.
28. Place filter-separator (Figure 13, Item 6) into the spill berm (Figure 13, Item 7).
29. Ground filter-separator (Figure 13, Item 6) per Chapter 2 in FM 10-67-1.
30. Connect 4 in. x 25 ft. discharge hose (Figure 13, Item 5) to filter-separator (Figure 13, Item 6).
31. Remove the sampling probe adapter from side of the filter-separator (Figure 13, Item 6).
32. Connect sampling probe adapter (Figure 13, Item 8) to the filter-separator (Figure 13, Item 6).
33. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
34. Connect the 4 in. x 25 ft. discharge hose female end (Figure 13, Item 9) to the sampling probe adapter male end (Figure 13, Item 8).
35. Remove 4 in. gate valve from TRICON containers 2, 3 or 5.
36. Remove a 6M x 6F x 4F tee assembly from ISO containers 2 or 4.
37. Connect the gate valve (Figure 13, Item 10) to the 4 in. x 25 ft. discharge hose (Figure 13, Item 9).
38. Connect the gate valve (Figure 13, Item 10) to the 6M x 6F x 4F tee assembly (Figure 13, Item 11).

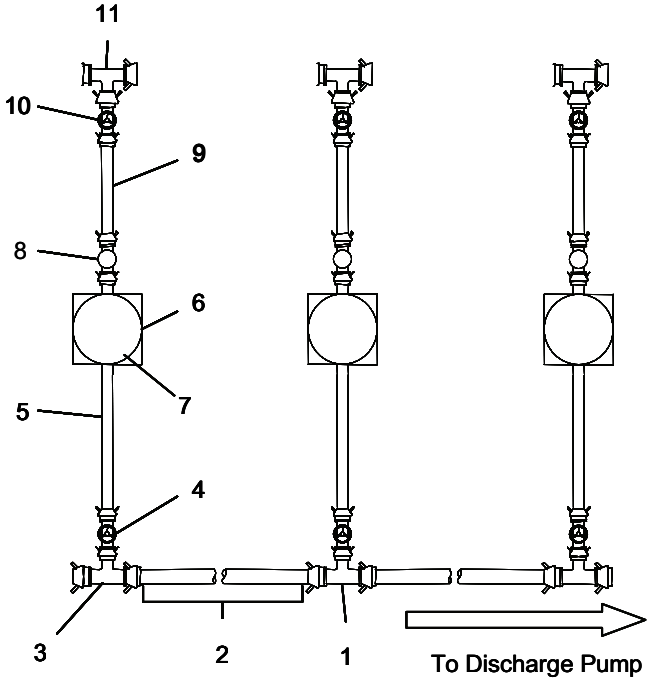


Figure 14. Installation of Filter-Separators.

39. Remove one 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.
40. Connect the 6 in. x 10 ft. discharge hose (Figure 14, Item 2) to the 6M x 6F x 4M tee assembly (Figure 14, Item 1).
41. Remove one 6M x 6F x 4M tee assembly from ISO containers 1, 2 or 4.
42. Connect the 6 in. x 10 ft. discharge hose (Figure 14, Item 2) to the 6M x 6F x 4M tee assembly (Figure 14, Item 3).

INSTALL FILTER-SEPARATOR-CONTINUED

43. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
44. Connect gate valve (Figure 14, Item 4) to the 6M x 6F x 4M tee valve assembly (Figure 14, Item 3).
45. Remove one 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
46. Connect the 4 in. x 25 ft. discharge hose (Figure 14, Item 5) to the 4 in. gate valve (Figure 14, Item 4).
47. Remove one filter-separator from TRICON container 5.
48. Remove one spill berm from TRICON container 5.
49. Place spill berm (Figure 14, Item 6) where filer-separator (Figure 14, Item 7) will be set up.
50. Ground filter-separator (Figure 14, Item 7) per Chapter 2 in FM 10-67-1.
51. Connect 4 in. x 25 ft. discharge hose (Figure 14, Item 5) to filter-separator (Figure 14, Item 7).
52. Remove the sampling probe adapter (Figure 14, Item 8) from side of the filter-separator (Figure 14, Item 7).
53. Connect sampling probe adapter (Figure 14, Item 8) to the filter-separator (Figure 14, Item 7).
54. Remove a 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
55. Connect the 4 in. x 25 ft. discharge hose (Figure 14, Item 9) to the sampling probe adapter (Figure 14, Item 8).
56. Remove a 4 in. gate valve from TRICON containers 2, 3 or 5.
57. Remove one 6M x 6F x 4F tee assembly from ISO containers 2 or 4.
58. Connect the gate valve (Figure 14, Item 10) to the 4 in. x 25 ft. discharge hose (Figure 14, Item 9).
59. Connect the gate valve (Figure 14, Item 10) to the 6M x 6F x 4F tee assembly (Figure 14, Item 11).

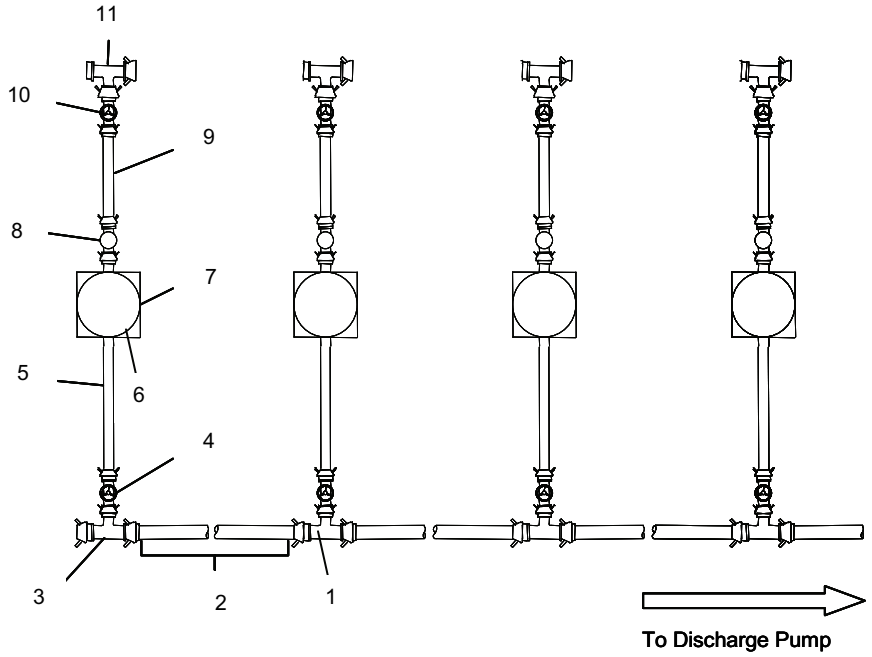


Figure 15. Installation of Filter-Separators.

60. Remove one 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5, and 6.
61. Remove one 6F x 6F x 4M tee assembly from ISO containers 1, 2 or 4.

INSTALL FILTER-SEPARATOR-CONTINUED

62. Connect the 6 in. x 10 ft. discharge hose (Figure 15, Item 2) to the 6M x 6F x 4M tee assembly (Figure 15, Item 1).
63. Remove one 6F x 6M x 4M tee assembly from ISO container 2.
64. Connect the 6 in. x 10 ft. discharge hose (Figure 15, Item 2) to the 6F x 6F x 4M tee assembly (Figure 15, Item 3).
65. Remove 4 in. gate valve from TRICON containers 2, 3 or 5.
66. Connect gate valve (Figure 15, Item 4) to the 6F x 6F x 4M tee assembly (Figure 15, Item 3).
67. Remove one 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
68. Connect the 4 in. x 25 ft. discharge hose (Figure 15, Item 5) to the 4 in. gate valve (Figure 15, Item 4).
69. Remove one filter-separator from TRICON container 5.
70. Remove one spill berm from TRICON container 5.
71. Place filter-separator (Figure 15, Item 6) into the spill berm (Figure 15, Item 7).
72. Ground filter-separator (Figure 15, Item 6) per Chapter 2 in FM 10-67-1.
73. Connect 4 in. x 25 ft. discharge hose (Figure 15, Item 5) to filter-separator (Figure 15, Item 6).
74. Remove the sampling probe adapter (Figure 15, Item 8) from side of the filter-separator (Figure 15, Item 6).
75. Connect the sampling probe adapter (Figure 15, Item 8) to the filter-separator (Figure 15, Item 6).
76. Remove a 4 in. x 25 ft. discharge hoses from TRICON containers 2, 4 or 5.
77. Connect the 4 in. 25 ft. discharge hoses (Figure 15, Item 9) to the sampling probe adapter (Figure 15, Item 8).
78. Remove one 4 in. gate valves from TRICON containers 2, 3 or 5.
79. Connect the 4 in. gate valve (Figure 15, Item 10) to the 4 in. x 25 ft. discharge hose (Figure 15, Item 9).
80. Remove 6M x 6F x 4F tee assembly from ISO containers 2 or 4.
81. Connect 6M x 6F x 4F tee assembly (Figure 15, Item 11) to 4 in. gate valve (Figure 15, Item 10).

END OF TASK

INSTALL BYPASS/RECIRCULATION LINE

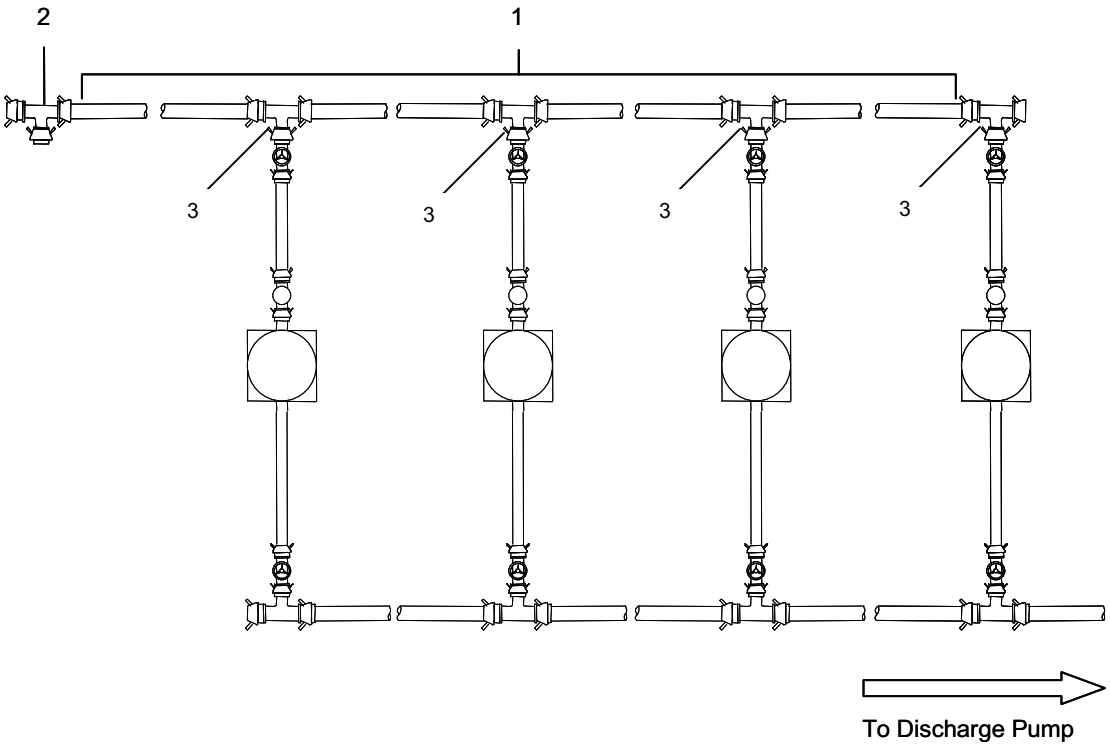


Figure 16. Install Discharge Line.

1. Remove four 6 in. x 10 ft. discharge hoses from TRICON containers 1,2 , 3, 5 or 6.
2. Connect one 6 in. x 10 ft. discharge hose (Figure 16, Item 1) between each of the 6M x 6F x 4F tee assemblies (Figure 16, Item 3).
3. Remove one 6F x 6F x 6M tee assembly from TRICON container 6.
4. Connect at the end of the last discharge hose (Figure 16, Item 1) to the tee assembly (Figure 16, Item 2).

INSTALL BYPASS/RECIRCULATION LINE – CONTINUED

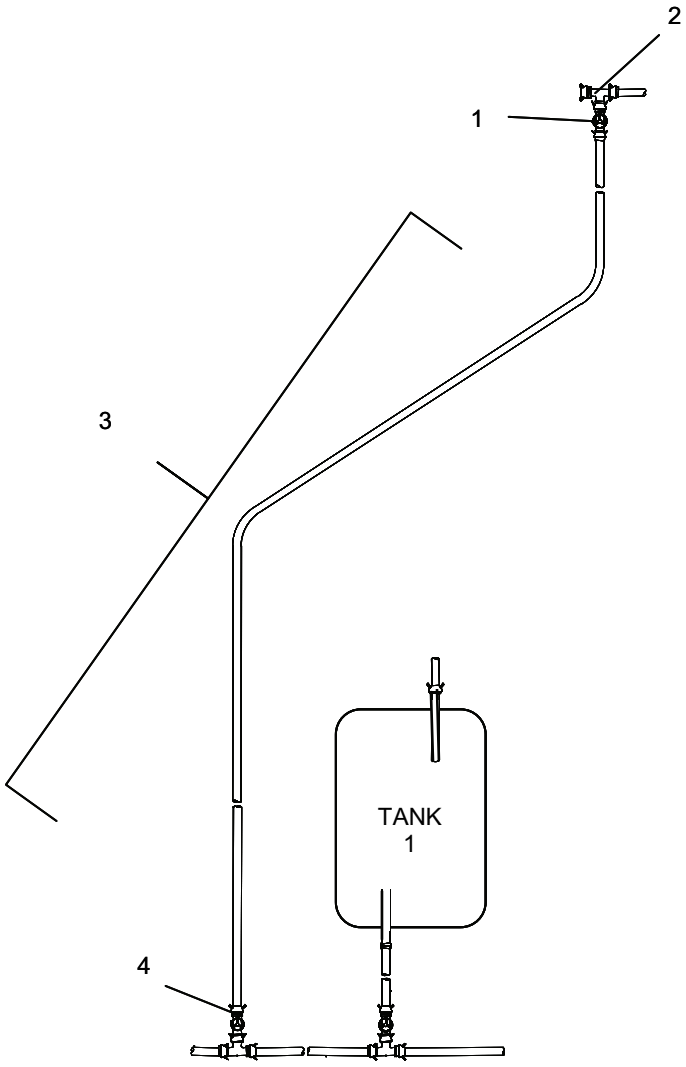


Figure 17. Install Bypass/Recirculation Line.

5. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3 or 4..
6. Connect the 6 in. gate valve (Figure 17, Item 1) to the tee assembly 6F x 6F x 6M (Figure 17, Item 2).
7. Remove nine sections of 6 in. x 50 ft. discharge hose from TRICON containers 4, 5, 6 or ISO container 6.
8. Connect one of the 6 in. x 50 ft. discharge hose (Figure 17, Item 3) to the 6 in. gate valve (Figure 17, Item 1).
9. Connect the remaining 6 in. x 50 ft. discharge hoses (Figure 17, Item 3).
10. Connect the end of the 6 in. x 50 ft. discharge hose (Figure 17, Item 3) to the 6 in. gate valve (Figure 17, Item 4).

END OF TASK

INSTALLATION OF DISTRIBUTION POINTS

INSTALL FLOWMETER

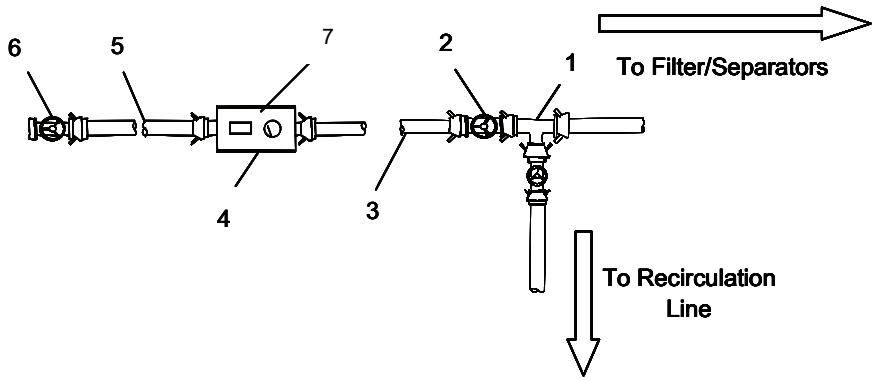


Figure 18. Installation of Distribution Points Flowmeter.

1. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
2. Connect the gate valve (Figure 18, Item 2) to tee assembly (Figure 18, Item 1).
3. Remove one section of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.
4. Connect the section of 6 in. x 10 ft. discharge hose (Figure 18, Item 3) to gate valve (Figure 18, Item 2).
5. Remove the 4 x 4 x 1 ft. spill containment berm and flowmeter from TRICON containers 1 or 3.
6. Position the spill containment berm (Figure 18, Item 7) on the ground adjacent to the end of the 6 in. x 10 ft. discharge hose (Figure 18, Item 3).
7. Place the flowmeter (Figure 18, Item 4) in the spill containment berm (Figure 18, Item 7).
8. Ground the flowmeter (Figure 18, Item 4).
    a. Remove the ground rod assembly from the ground rod box on the flowmeter (Figure 18, Item 4).
    b. Install the ground rod per FM 10-67-1.
    c. Attach ground cable clamps to the flowmeter (Figure 18, Item 4).
9. Connect the section of 6 in. x 10 ft. discharge hose (Figure 18, Item 3) to the flowmeter (Figure 18, Item 4).
10. Remove one section of 6 in. x 10 ft. discharge hose from TRICON containers 1, 2, 3, 5 or 6.
11. Connect the section of 6 in. x 10 ft. discharge hose (Figure 18, Item 5) to the flowmeter (Figure 18, Item 4).
12. Remove one 6 in. gate valve from TRICON container 6 or ISO containers 1, 2, 3, and 4.
13. Connect the male end of the 6 in. x 10 ft. discharge hose (Figure 18, Item 5) to 6 in. gate valve (Figure 18, Item 6).

END OF TASK

INSTALL BULK ISSUE POINTS WITH D-1 NOZZLES

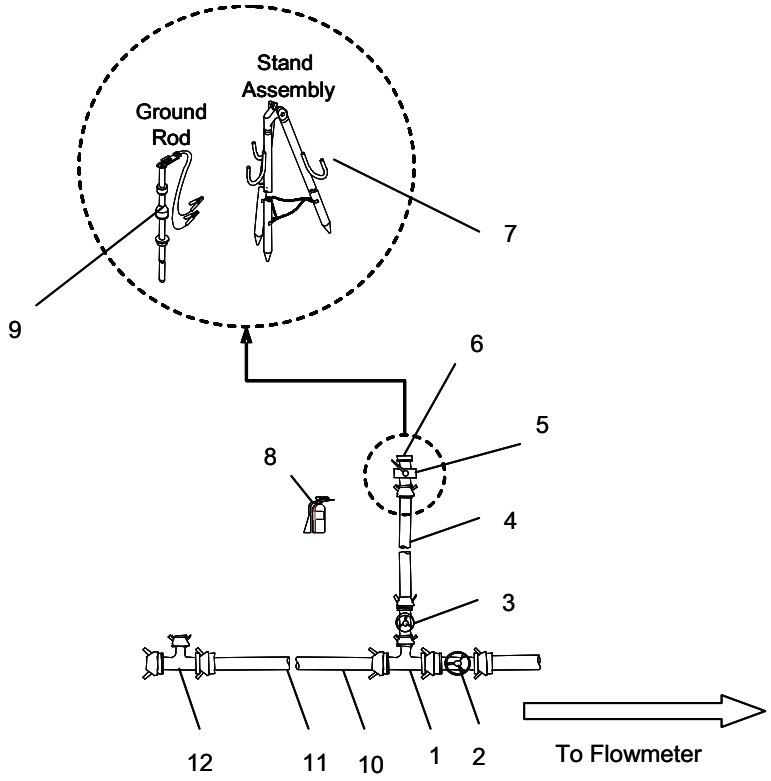


Figure 19. Installation of Issue Points with D-1 Nozzles.

1. Remove one 6M x 6F x 4M tee assembly from ISO containers 1, 2 or 4.
2. Connect the 6M x 6F x 4M tee assembly (Figure 19, Item 1) to the 6 in. gate valve (Figure 19, Item 2).
3. Remove a 4 in. gate valve from TRICON containers 2, 3 or 5.
4. Connect the 4 in. gate valve (Figure 19, Item 3) to the 6M x 6F x 4M tee assembly (Figure 19, Item 1) pointing towards the issue point.
5. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
6. Connect the female end of the 4 in. x 25 ft. discharge hose (Figure 19, Item 4) to 4 in. gate valve (Figure 19, Item 3).
7. Remove one 4 x 4 in. butterfly valve from TRICON containers 1 or 3.
8. Connect the butterfly valve (Figure 19, Item 5) to the section of 4 in. x 25 ft. discharge hose (Figure 19, Item 4).
9. Remove an Aircraft Pressure Refueling Nozzle, D-1, with 4 in. female camlock from TRICON container 3.
10. Connect the D-1 nozzle (Figure 19, Item 6) to the butterfly valve (Figure 19, Item 5).
11. Remove one stand assembly from TRICON container 3.
12. Remove one fire extinguisher from TRICON container 3.
13. Remove one ground rod from TRICON container 4.
14. Position the stand assembly (Figure 19, Item 7) and fire extinguisher (Figure 19, Item 8) adjacent to the butterfly valve (Figure 19, Item 5).

INSTALL BULK ISSUE POINTS WITH D-1 NOZZLES – CONTINUED

15. Install the ground rod (Figure 19, Item 9) adjacent to the stand assembly (Figure 19, Item 7) per FM 10-67-1.
16. Remove one section of 6 in. x 25 ft. discharge hose from TRICON container 4.
17. Remove one section of 6 in. x 50 ft. discharge hose from TRICON containers 4, 5, 6 or ISO container 6.
18. Connect the 6 in. x 25 ft. discharge hose (Figure 19, Item 10) to the 6M x 6F x 4M tee assembly (Figure 19, Item 1).
19. Connect the 6 in. x 50 ft. discharge hose (Figure 19, Item 11) to the 6 in. x 25 ft. discharge hose (Figure 19, Item 10).
20. Remove one 6M x 6F x 4M tee assembly from ISO containers 1, 2 or 4.
21. Connect the 6M x 6F x 4M (Figure 19, Item 12) to the end of the 6 in. X 50 ft. discharge hose (Figure 19, Item 11).
22. Remove one fuel spill control kit and two drums from TRICON container 2.
23. Place one fuel spill control kit centered among all six bulk fuel points.
24. Repeat steps 3 through 21 for the remaining two bulk issue points with D-1 nozzles.

END OF TASK

INSTALL BULK ISSUE POINTS WITHOUT D-1 NOZZLES

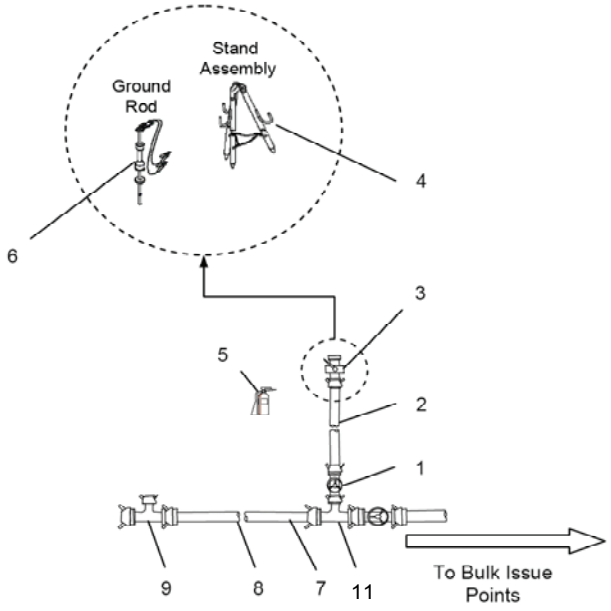


Figure 20. Installation of Bulk Issue Points Without D-1 Nozzle.

1. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
2. Connect the gate valve (Figure 20, Item 1) to the 6M x 6F x 4M tee assembly (Figure 20, Item 11).
3. Remove one section of 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.

INSTALL BULK ISSUE POINTS WITHOUT D-1 NOZZLES-CONTINUED

4. Connect the section of 4 in. x 25 ft. discharge hose (Figure 20, Item 2) to 4 in. gate valve (Figure 20, Item 1).
5. Remove one 4 x 4 in. butterfly valve from TRICON containers 1 or 3.
6. Connect the 4 x 4 in. butterfly valve (Figure 22, Item 3) to the sections of 4 in. x 25 ft. discharge hose (Figure 20, Item 2).
7. Remove one stand assembly from TRICON container 3.
8. Remove one fire extinguisher from TRICON container 3.
9. Remove one ground rod from TRICON container 4.
10. Position the stand assembly (Figure 20, Item 4) and fire extinguisher (Figure 20, Item 5) adjacent to the butterfly valve (Figure 20, Item 3).
11. Install the ground rod (Figure 20, Item 6) adjacent to the stand assembly (Figure 20, Item 4) per FM 10-67-1.
12. Remove one section of 6 in. x 25 ft. discharge hose from TRICON container 4.
13. Remove one section of 6 in. x 50 ft. discharge hose from TRICON containers 4, 5, 6 or ISO container 6.
14. Connect the section of 6 in. x 25 ft. discharge hose (Figure 20, Item 7) to the 6M x 6F x 4M tee assembly (Figure 20, Item 11).
15. Connect the section of 6 in. x 25 ft. discharge hose with tee assembly (Figure 20, Items 7 and 11) to the section of 6 in. x 50 ft. discharge hose (Figure 20, Item 8).
16. Remove one 6M x 6F x 4M tee assembly from ISO containers 1, 2 or 4.
17. Connect the 6M x 6F x 4M tee assembly (Figure 20, Item 9) to the end of 6 in. x 50 ft. discharge hose (Figure 20, Item 8).
18. Remove one fuel spill control kit and two drums from TRICON container 4.
19. Place one fuel spill control kit (Figure 20, Item 10) near 6 in. x 50 ft. discharge hoses (Figure 20, Item 8).
20. Repeat steps 1 through 19 for the next issue point. On the last bulk issue point, omit steps 12 through 19.

END OF TASK

INSTALL RETAIL ISSUE POINTS

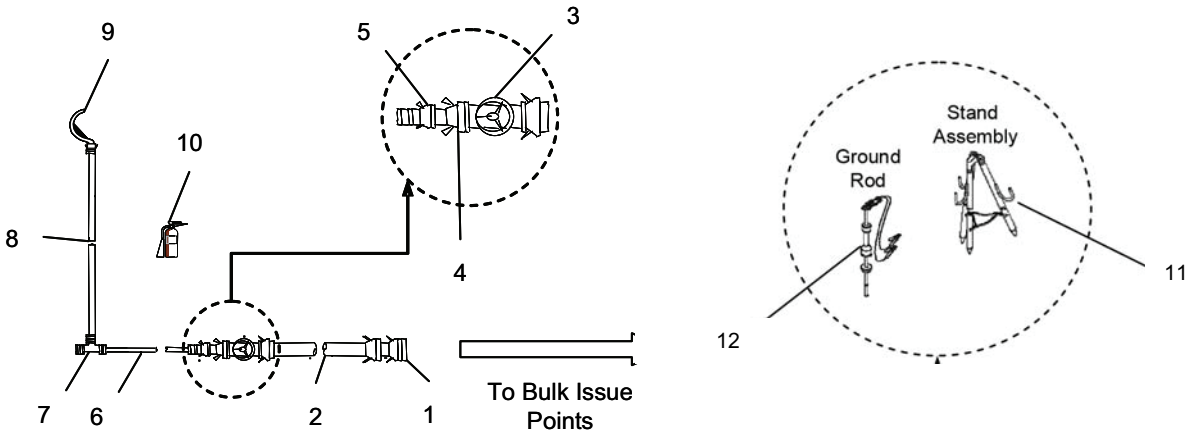


Figure 21. Installation of First Retail Issue Point.

1. Remove one 6F x 4M reducer from TRICON container 3.
2. Connect the 6F x 4M reducer (Figure 21, Item 1) to the 6M x 6F x 4M tee assembly on the last Bulk Issue Points without D-1 Nozzles.
3. Remove one 4 in. x 25 ft. discharge hose from TRICON containers 2, 4 or 5.
4. Connect 4 in. x 25 ft. discharge hose (Figure 21, Item 2) to the 6F x 4M reducer (Figure 21, Item 1).
5. Remove one 4 in. gate valve from TRICON containers 2, 3 or 5.
6. Connect the 4 in. gate valve (Figure 21, Item 3) to the 4 in. x 25 ft. discharge hose (Figure 21, Item 2).
7. Remove one 4F x 2M reducer from TRICON container 3.
8. Connect the 4F x 2M reducer (Figure 21, Item 4) to the 4-in gate valve (Figure 21, Item 3).
9. Remove Regulator, Pressure, 2 in. F inlet, 2 in Unisex Outlet from TRICON container 3.
10. Connect the Regulator, Pressure, 2 in. F inlet, 2 in. Unisex Outlet (Figure 21, Item 5) to the 4F x 2M reducer (Figure 21, Item 4).
11. Remove two sections of 2 in. x 50 ft. discharge hose from TRICON container 4.
12. Connect the sections of 2 in. x 50 ft. discharge hose (Figure 21, Item 6) to the Regulator, Pressure 2 in. F inlet, 2 in. unisex outlet (Figure 21, Item 5).
13. Remove one 2 in. tee assembly from TRICON container 3.
14. Connect the 2 in. tee assembly (Figure 21, Item 7) to the end of the 2 in. X 50 ft. discharge hose (Figure 21, Item 6).
15. Remove one section of 2 in. x 50 ft. discharge hose from TRICON container 4.
16. Connect the section of 2 in. x 50 ft. discharge hose (Figure 21, Item 8) to the 2 in. tee assembly (Figure 21, Item 7).
17. Remove one Closed Circuit Refueling Nozzle from TRICON container 3.
18. Connect the Closed Circuit Refueling Nozzle (Figure 21, Item 9) to the section of 2 in. x 50 ft. discharge hose (Figure 21, Item 8).

INSTALL RETAIL ISSUE POINTS-CONTINUED

19. Remove one fire extinguisher and stand assembly from TRICON container 3.
20. Remove one ground rod assembly from TRICON container 4.
21. Position the fire extinguisher (Figure 21, Item 10), stand assembly (Figure 21, Item 11), and ground rod assembly (Figure 21, Item 12) per FM 10-67-1 adjacent to the end of the 2 in. x 50 ft. discharge hose (Figure 21, Item 8).

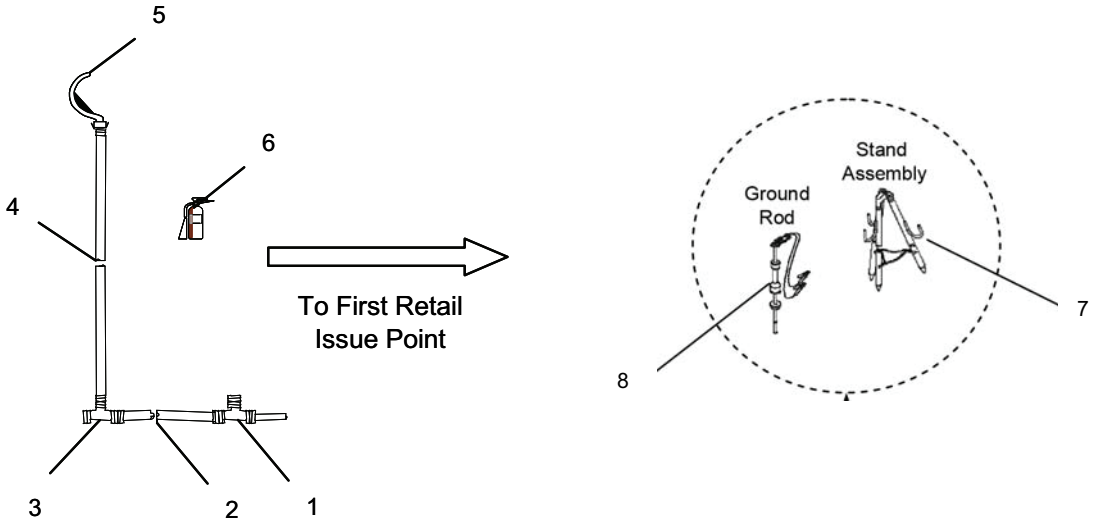


Figure 22. Installation of Second Retail Issue Point.

22. Remove two sections of 2 in. x 50 ft. discharge hose from TRICON container 4.
23. Connect the sections of 2 in. x 50 ft. discharge hose (Figure 22, Item 2) to the 2 in. tee assembly (Figure 22, Item 1).
24. Remove one 2 in. tee assembly from TRICON container 3.
25. Connect the 2 in. tee assembly (Figure 22, Item 3) to the section of 2 in. x 50 ft. discharge hose (Figure 22, Item 2).
26. Remove one section of 2 in. x 50 ft. discharge hose from TRICON container 4.
27. Connect the section of 2 in. x 50 ft. discharge hose (Figure 22, Item 4) to the 2 in. tee assembly (Figure 22, Item 3).
28. Remove one Closed Circuit Refueling Nozzle from TRICON container 3.
29. Connect Closed Circuit Refueling Nozzle (Figure 22, Item 5) to the section of the 2 in. x 50 ft. discharge hose (Figure 22, Item 4).
30. Remove one fire extinguisher and one stand assembly from TRICON container 3.
31. Remove one ground rod assembly from TRICON container 4.
32. Position the fire extinguisher (Figure 22, Item 6), stand assembly (Figure 22, Item 7) and ground rod assembly (Figure 22, Item 8) per FM 10-67-1 adjacent to the end of the 2 in. X 50 ft. discharge hose (Figure 22, Item 4).

END OF TASK

FILL, SERVICE AND CALIBRATE THE FUEL ADDITIVE INJECTOR ASSEMBLY

Refer to TM 10-4930-364-13&P for procedures to fill, service and calibrate the Fuel Additive Injector Assembly.

OPERATING PROCEDURES – OPERATE THE FSSP

STORE FUEL

1. Attach butterfly valves to the output of the transporter or fuel supply pipeline. Use adapters, as necessary, to mate transporter or pipeline butterfly valves to FSSP receipt points.

A I N

Fuel tanks can be badly damaged by overfilling them. Fuel is normally pumped into one tank at a time while remaining gate valve assemblies leading to the other tanks in the FSSP are closed to reduce possible damage to fuel tanks.

N

Refer to foldout FO-2 in the rear of this manual for callouts. The gate valves to be closed will vary depending on the tank to be filled. Isolate the tank to be filled by opening and closing the required gate valves.

2. Close gate valve (FO-2, Item 1) for the desired tank to be filled.
3. Open gate valve (FO-2, Item 5) to the desired fuel tank to permit flow of fuel to that tank and ensure all other gate valves are closed.
4. Close gate valve (FO-2, Item 2).

N

Only perform steps 7 and 8 if additive is required. If additive is not required, ensure gate valves (FO-2, Items 3 and 4) are open and gate valves (FO-2, Items 6 and 7) are closed.

5. Close gate valve (FO-2, Item 3).
6. Close gate valve (FO-2, Item 4).
7. Open gate valve (FO-2, Item 6).
8. Open gate valve (FO-2, Item 7).
9. Open gate valve (FO-2, Item 8).
10. Open the suction port (FO-2, Item 9) on the 600 GPM pumping assembly (FO-2, Item 11).

N

Ensure pump is primed to prevent any damage.

11. Open butterfly valves (FO-2, Item 10) to allow fuel to flow from the output of the transporter or fuel supply pipeline.
12. Operate the 600 GPM pumping assembly (FO-2, Item 11) per applicable 600 GPM TM.
13. Open the discharge port (FO-2, Item 12) on the 600 GPM pumping assembly (FO-2, Item 11).

OPERATING PROCEDURES – OPERATE THE FSSP - CONTINUED

N

Shutdown procedures are performed after fuel is put into tank.

14. Close the discharge port on the 600 GPM pumping assembly (FO-2, Item 12).
15. Close the suction port on the 600 GPM pumping assembly (FO-2, Item 9).
16. Shut down the 600 GPM pumping assembly (FO-2, Item 11) per applicable 600 GPM pump assembly TM when transferring of fuel is completed.
17. Close butterfly valves (FO-2, Item 10).
18. Close gate valve (FO-2, Item 8).
19. If necessary close gate valve (FO-2, Item 7).
20. If necessary close gate valve (FO-2, Item 6).
21. Close gate valve (FO-2, Item 5).
22. If necessary open gate valve (FO-2, Item 4).
23. If necessary open gate valve (FO-2, Item 3).
24. Open gate valve (FO-2, Item 1).
25. Remove butterfly valves from the output of the transporter or fuel supply pipeline.

END OF TASK

BYPASS/RECIRCULATION PROCEDURES

BYPASS STEPS

N

Refer to foldout FO-5 in the rear of this manual for callouts.

1. Attach butterfly valves (FO-5, Item 1) to the output of the transporter or fuel supply pipeline. Use adapters, as necessary, to mate transporter or pipeline butterfly valves to FSSP receipt points.
2. Close gate valves (FO-5, Item 2) to bypass the fuel additive injector.
3. Close gate valve (FO-5, Item 3) to bypass fuel tanks.
4. Open gate valves (FO-5, Items 4, 5, 6, 7, 8, 9 and 10).
5. Open butterfly valve (FO-5, Item 1).
6. Operate the 600 GPM pumping assembly (FO-5, Item 12) per applicable 600 GPM TM.
7. Open the suction port (FO-5, Item 11) on the 600 GPM pumping assembly (FO-5, Item 12).
8. Open the discharge port (FO-5, Item 14) on the 600 GPM pumping assembly (FO-5, Item 12).
9. Open gate valve (FO-5, Item 15) for the fuel bulk discharge point selected to discharge fuel.
10. Open butterfly valve (FO-5, Item 13)
11. To dispense fuel through a nozzle assembly, connect one nozzle assembly grounding clamp to tanker.

BYPASS STEPS-CONTINUED

12. When bypass operation is complete, release lever on nozzle assembly.
13. Disconnect ground clamp from tanker
14. Close all valves opened in this procedure or continue operation as desired.
15. Close the discharge port (FO-5, Item 14) on the 600 GPM pumping assembly (FO-5, Item 12).
16. Close the suction port on the 600 GPM pumping assembly (FO-5, Item 11).
17. Shut down the 600 GPM pumping assembly (FO-5, Item 12) per applicable 600 GPM pump assembly TM.

END OF TASK

RECIRCULATION

N

Refer to foldout FO-6, in the rear of this manual for callouts. The gate valves to be opened will vary depending on the tanks to be used.

1. Open gate valve assembly (FO-6, Item 1) on the fuel tank (FO-6, Item 2) from which fuel will be drawn.
2. Close gate valve (FO-6, Item 3).
3. Open gate valve assemblies (FO-6, Items 4 and 5).

A I N

A minimum of two filer separators are needed for operation of the 800K system. Failure to do so may result in equipment damage.

4. Select desired 350 GPM filter-separator (FO-6, Item 7) to use in recirculation operation and open one gate valve assembly (FO-6, Item 8) and another gate valve assembly (FO-6, Item 9) for selected 350 GPM filter-separator (FO-3, Item 7).
5. Operate pump (FO-6, Item 11) per applicable 600 Pump Assembly TM to move fuel from desired fuel tank (FO-6, Item 2).
6. Open suction port (FO-6, Item 10) on 600 GPM pumping assembly (FO-6 Item 11).
7. Open discharge port (FO-6, Item 11) on 600 GPM pumping assembly (FO-6, Item 11).
8. Open gate valve assembly (FO-6, Item 6).
9. Open gate valve assembly (FO-6, Item 13) on the fuel tank (FO-6, Item 2) from which fuel will be SENT to.
10. Once recirculation process is complete close all valves opened in this procedure or continue operations, as desired.

N

It is recommended during the recirculation process that half of the product in the tank be recirculated.

11. Shut down the 600 GPM pumping assembly (FO-3, Item 11) per applicable 600 Pump Assembly TM.

END OF TASK

DISPENSE FUEL

N

Refer to foldout FO-3, in the rear of this manual for callouts. The gate valves to be opened will vary depending on the tank to be used.

1. Open gate valve assembly (FO-3, Item 1) on the fuel tank (FO-3, Item 2) from which fuel will be drawn.
2. Close six butterfly valve assemblies (FO-3, Item 3).
3. Close two gate valves (FO-3, Items 4 and 5).
4. Open gate valve assembly (FO-3, Item 6).

A I N

A minimum of two filter separators are needed for operation of the 800K system. Failure to do so may result in equipment damage.

5. Select desired 350 GPM filter-separator (FO-3, Item 7) to use in dispensing operation and open one gate valve assembly (FO-3, Item 8) and another gate valve assembly (FO-3, Item 9) for selected 350 GPM filter-separator (FO-3, Item 7).

N

Ensure pump is primed prior to operating pump. Failure to do so may result in equipment damage.

6. Operate pump (FO-3, Item 10) per applicable 600 Pump Assembly TM to move fuel from desired fuel tank (FO-3, Item 2).
7. Open suction port on (FO-3, Item 20) on 600 GPM pumping assembly (FO-3, Item 10) per applicable 600 Pump Assembly TM.
8. Operate pump (FO-3, Item 10) per applicable 600 Pump Assembly TM to move fuel from desired fuel tank (FO-3, Item 2).
9. Open discharge port (FO-3, Item 19) to push fuel into the fuel discharge lines.
10. Open gate valves (FO-3, Items 11 and 12).
11. To dispense fuel through the bulk fuel line, follow the following steps:
    a. Open butterfly valve (FO-3, Item 3).
    b. Open gate valve (FO-3, Item 13) for the fuel bulk discharge point selected to discharge fuel.
    c. To dispense through a nozzle assembly (FO-3, Item 14), connect one nozzle assembly grounding clamp (FO-3, Item 19) to tanker.
    d. When dispensing operation is completed, release lever on nozzle assembly (FO-3, Item 14).
    e. Disconnect ground grounding clamp (FO-3, Item 19) from tanker.
    f. Close all valves opened in this procedure or continue operations, as desired.
    g. Shut down the 600 GPM pumping assembly (FO-3, Item 10) per applicable 600 Pump Assembly TM.
11. To dispense fuel through the retail fuel line, follow the following steps:
    a. Open gate valve (FO-3, Item 5).

DISPENSE FUEL - CONTINUED

b. Connect nozzle assembly grounding clamp (FO-3, Item 16) to an FSSP ground rod (FO-3, Item 17).

c. Place nozzle spout (FO-3, Item 18) into fuel container or vehicle fuel tank.

d. Operate lever on nozzle assembly (FO-3, Item 20) to dispense fuel.

e. Remove nozzle spout (FO-3, Item 18) from fuel container or vehicle tank.

f. Disconnect nozzle assembly ground clamp (FO-3, Item 15) from fuel container or vehicle.

g. Disconnect remaining nozzle assembly grounding clamp (FO-3, Item 16) from the FSSP ground rod (FO-3, Item 17).

h. Close all valves opened in this procedure or continue operations, as desired.

i. Shut down the 600 GPM pumping assembly (FO-3, Item 10) per applicable 600 Pump Assembly TM.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER USUAL CONDITIONS – PREPARATION FOR MOVEMENT

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

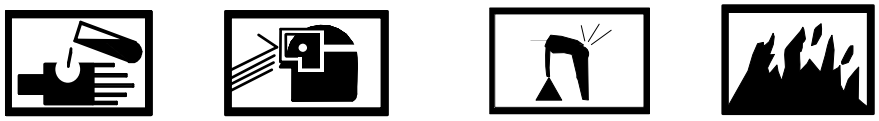
Personnel Required
Petroleum Supply Specialist 92F (16)

Materials/Parts
Apron, utility (WP 0165, Item 2)

References
WP 0002

FUEL TANK EVACUATION

WARNING



CHEMICAL **EYE PROTECTION** **HEAVY OBJECTS** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging. When lifting 6 inch hoses, a two-man lift is required to avoid injury to personnel.

1. Connect a female 2 in. camlock X 2 in. valved dry-break adapter to the male connector of the ball valve on the drain of fuel tank number 1.
2. Connect a 2 in dry-break hose to female 2 in. camlock X 2 in. valved dry-break adapter
3. Connect a male 2 in cam lock X 2 in. dry-break to female 2 in. X male 4. in adapter at the drain line of fuel tank and to the tanker, which will receive the fuel.
4. Open the ball valve.
5. Open the valve on the valved dry-break adapter and the valve on the valved dry-break hose.
6. Use the procedures from the technical manual for the tanker to defuel fuel tank.
7. Repeat steps 1 through 6 for fuel tanks numbers 2 through 4.
8. Refer to SSI for tank folding procedures.

END OF TASK

FSSP EVACUATION

DISPENSING LINE EVACUATION

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

WARNING

HOT AREA

Pallets are fabricated from Polyethylene and should not be exposed to direct sunlight in high heat for extended periods. Return pallets to TRICONs after pallet is unloaded. Do not transport pallet with unsecured/unstrapped components. Transport of pallets with unsecured/unstrapped components may result in damage to the equipment and/or injury to personnel.

N

Illustration callouts in the FSSP evacuation procedure reference foldout FO-4 located in the rear of this manual.

N

You can remove fuel from the line by tank truck per FM 10-67-1, however another option is to use the Displacement and Evacuation Kit (WP 0164, Item 19) which is located in TRICON container 2. To use the Displacement and Evacuation Kit (WP 0164, Item19) follow these steps to remove fuel from the system hose lines:

a. Place a hose clamp on the section of hose just in front of the pump discharge manifold where the hose line starts.

b. Disconnect the hose from the pump, and attach the ball injector, with the ball, to the end of the hose.

c. Move the pump to the other end of the hose line, and connect it to the system.

d. Put a second hose clamp on the end of the hose that connects to the pump suction manifold.

e. Attach the ball receiver to the end of the hose line.

DISPENSING LINE EVACUATION-CONTINUED

f. Attach an air compressor hose to the ball injector at the start of the system (where hose was disconnected from pump) and inject compressed air into the hose behind the ball.

g. Remove both hose clamps from the system. You usually need 20 to 25 PSI or air pressure to move the displacement ball at a satisfactory rate.

h. Start the pump and keep it running to remove the fuel forward and into storage. Use the last tank in the system or a tank vehicle if available.

i. Continue these steps throughout the system.

N

While breaking hose throughout the system ensure fuel is stored in an appropriate container and dispose per local regulation.

1. Close gate valve (FO-4, Item 1) on the dispensing side of fuel tank number 1.
2. Close gate valve (FO-4, Item 2) on the dispensing side of fuel tank number 2.
3. Close gate valve (FO-4, Item 3) on the dispensing side of fuel tank number 3.
4. Close gate valve (FO-4, Item 4) on the dispensing side of fuel tank number 4.
5. Close the gate valve (FO-4, Item 5) to the recirculation hose at the dispensing line.
6. Ensure gate valves (FO-4, Items 6 and 10) are open to drain filter-separators.
7. Close the discharge port on the discharge 600 GPM pumping assembly (FO-4, Item 11).
8. Close the valve on the valved dry break coupling (FO-4, Item 12) at the last dispensing point where the 1 in. nozzle (FO-4, Item 13) is located.

N

Some trapped fuel will escape from the nozzle.

9. Place a drain pan under the 1 in. nozzle (FO-4, Item 13) connection to catch fuel when 1 in. nozzle (FO-4, Item 13) is removed.
10. Hold the dispensing end of the 1 in. nozzle (FO-4, Item 13) down over the drain pan, close the valve on the 1 in. nozzle (FO-4, Item 13) valved dry break.
11. Separate the 1 in. nozzle (FO-4, Item 13) slowly from the valved dry break coupling (FO-4, Item 12).
12. Install cap on 1 in. nozzle (FO-4, Item 13).
13. Connect the dry break coupling (FO-4, Item 12), where the 1 in. nozzle (FO-4, Item 13) was located, to the tanker which will receive the fuel.
14. Open the valve on the valved dry break coupling (FO-4, Item 12).
15. Open gate valves (FO-4, Items 14, 15, 16, 17, 18 and 19) to dispensing points.
16. Use the procedures from the technical manual for the tanker to defuel the dispensing line.

DISPENSING LINE EVACUATION-CONTINUED

N

After the tanker has started defueling the dispensing line, the hose will start to collapse.

17. Starting at first dispensing point next to the retail points, disconnect butterfly valve (FO-4, Item 20).
18. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 20).
19. Install dust cap on the end of the hose (FO-4, Item 21) where the butterfly valve (FO-4, Item 20) was located.
20. Close gate valve (FO-4, Item 19) at the female end of the hose (FO-4, Item 21).
21. Disconnect the female end of the hose (FO-4, Item 21) from gate valve (FO-4, Item 19).
22. Roll the hose (FO-4, Item 21) toward the female end of the hose.
23. Install the dust plug in the female end of the hose (FO-4, Item 21).
24. Install dust cap on gate valve (FO-4, Item 19).
25. Disconnect butterfly valve (FO-4, Item 22) at the second dispensing point.
26. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 22).
27. Close gate valve (FO-4, Item 18) at the female end of the hose (FO-4, Item 23).
28. Disconnect the female end of the hose (FO-4, Item 23) from gate valve (FO-4, Item 18).
29. Roll the hose (FO-4, Item 23) toward the female end of the hose.
30. Install the dust plug and dust cap on the hose (FO-4, Item 23).
31. Install dust cap on gate valve (FO-4, Item 18).
32. Disconnect butterfly valve (FO-4, Item 24) at the third dispensing point.
33. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 24).
34. Close gate valve (FO-4, Item 17) at the female end of the hose (FO-4, Item 25).
35. Disconnect the female end of the hose (FO-4, Item 25) from gate valve (FO-4, Item 17).
36. Roll the hose (FO-4, Item 25) toward the male end of the hose.
37. Install the dust plug and dust cap on the hose (FO-4, Item 25).
38. Install dust cap on gate valve (FO-4, Item 17).
39. Disconnect D-1 nozzle (FO-4, Item 223) from butterfly valve (FO-4, Item 26).
40. Disconnect butterfly valve (FO-4, Item 26) at the fourth dispensing point.
41. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 26).
42. Close gate valve (FO-4, Item 16) at the female end of the hose (FO-4, Item 27).
43. Disconnect the female end of the hose (FO-4, Item 27) from gate valve (FO-4, Item 16).
44. Roll the hose (FO-4, Item 27) toward the female end of the hose.
45. Install the dust plug and dust cap on the hose (FO-4, Item 27).
46. Install dust cap on gate valve (FO-4, Item 16).
47. Disconnect D-1 nozzle (FO-4, Item 224) from butterfly valve (FO-4, Item 28).

DISPENSING LINE EVACUATION-CONTINUED

48. Disconnect butterfly valve (FO-4, Item 28) at the fifth dispensing point.
49. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 28).
50. Close gate valve (FO-4, Item 15) at the female end of the hose (FO-4, Item 29).
51. Disconnect the female end of the hose (FO-4, Item 29) from gate valve (FO-4, Item 15).
52. Roll the hose (FO-4, Item 29) toward the female end of the hose.
53. Install the dust plug and dust cap on the hose (FO-4, Item 29).
54. Install dust cap on gate valve (FO-4, Item 15).
55. Disconnect D-1 nozzle (FO-4, Item 225) from butterfly valve (FO-4, Item 30).
56. Disconnect butterfly valve (FO-4, Item 30) at the sixth dispensing point.
57. Install the dust cap and dust plug on the butterfly valve (FO-4, Item 30).
58. Close gate valve (FO-4, Item 14) at the female end of the hose (FO-4, Item 31).
59. Disconnect the female end of the hose (FO-4, Item 31) from gate valve (FO-4, Item 14).
60. Roll the hose (FO-4, Item 31) toward the female end of the hose.
61. Install the dust plug and dust cap on the hose (FO-4, Item 31).
62. Install dust cap on gate valve (FO-4, Item 14).
63. Disconnect the discharge hose (FO-4, Item 32) from the discharge valve of the discharge 600 GPM pumping assembly (FO-4, Item 11).
64. Install dust cap on discharge port of the 600 GPM pumping assembly (FO-4, Item 11).
65. Install the dust plug on the female end of the hose (FO-4, Item 32).
66. Disconnect discharge hose (FO-4, Item 32) from tee assembly (FO-4, Item 33).
67. Roll hose (FO-4, Item 32) from the female end toward the male end.
68. Install dust plug in tee assembly (FO-4, Item 33).
69. Close gate valves (FO-4, Items 6 and 10).
70. Disconnect hose (FO-4, Item 34) from gate valve (FO-4, Item 6).
71. Disconnect hose (FO-4, Item 35) from gate valve (FO-4, Item 10).
72. Disconnect gate valve (FO-4, Item 6) from 4 in. male port of the tee assembly (FO-4, Item 33) and install dust cap on male end of the tee assembly (FO-4, Item 33).
73. Disconnect discharge hose (FO-4, Item 34) from inlet side of the filter separator (FO-4, Item 7).
74. Install the dust cap on the hose (FO-4, Item 34) and dust plug in filter separator.
75. Disconnect discharge hose (FO-4, Item and 35) from the sampling port (FO-4, Item 9).
76. Disconnect the sampling port (FO-4, Item 9) from the filter separator (FO-4, Item 7).
77. Install plug on the sampling port (FO-4, Item 9) and store on the side of the filter separator (FO-4, Item 7).
78. Install the dust plug in the hose (FO-4, Item 35) and dust plug in filter separator (FO-4, Item 7).
79. Roll discharge hoses (FO-4, Items 34 and 35) and prepare them for storage in appropriate container.
80. Using a forklift move filter separator (FO-4, Item 7) and spill berm (FO-4, Item 8) to appropriate container.

DISPENSING LINE EVACUATION-CONTINUED

81. Disconnect discharge hose (FO-4, Item 36) from tee assembly (FO-4, Item 33).
82. Install dust plug in the female end of the hose (FO-4, Item 36).
83. Install dust cap on tee assembly (FO-4, Item 33) where hose (FO-4, Item 36) was disconnected.
84. Disconnect hose (FO-4, Item 36) from tee assembly (FO-4, Item 37).
85. Roll hose (FO-4, Item 36) toward the tee assembly (FO-4, Item 37).
86. Install dust cap on hose (FO-4, Item 36).
87. Install dust plug in tee assembly (FO-4, Item 36).
88. Follow steps 66-84 to disconnect the three remaining filter separators.

N

Ensure appropriate containers are available when disconnecting filter-separators due to the possibility of residual fuel in the filter separators.

89. Remove gate valves (FO-4, Item 10) from tee assemblies (FO-4, Items 38, 39, 40, and 41).
90. Install dust caps on gate valves (FO-4, Items 10), and dust plug in tee assemblies (FO-4, Items 38).
91. Disconnect hose (FO-4, Item 42) from tee assemblies (FO-4, Items 38 and 39).
92. Install dust plug in female end of hose (FO-4, Item 42) and dust cap on tee assembly (FO-4, Item 38).
93. Roll hose (FO-4, Item 42) from female end to male end towards tee assembly (FO-4, Item 39).
94. Install dust cap on hose (FO-4, Item 42) and dust plug in tee assembly (FO-4, Item 39).
95. Disconnect hose (FO-4, Item 43) from tee assemblies (FO-4, Items 39 and 40).
96. Install dust plug in hose (FO-4, Item 43) and dust cap on tee assembly (FO-4, Item 39).
97. Roll hose (FO-4, Item 43) towards tee assembly (FO-4, Item 40).
98. Install dust cap on male end of hose (FO-4, Item 43) and dust plug in tee assembly (FO-4, Item 40).
99. Disconnect hose (FO-4, Item 44) from tee assemblies (FO-4, Items 40 and 41).
100. Install dust plug in female end of hose (FO-4, Item 44) and dust cap on the tee assembly (FO-4, Item 40).
101. Install dust cap on male end of hose (FO-4, Item 44) and dust plug in tee assembly (FO-4, Item 41).
102. Roll hose (FO-4, Item 44).
103. Disconnect hose (FO-4, Item 45) from tee assemblies (FO-4, Items 41 and 46).
104. Install dust plug in hose (FO-4, Item 45) and dust cap on tee assembly (FO-4, Item 41).
105. Roll hose (FO-4, Item 45) towards tee assembly (FO-4, Item 46).
106. Lift tee assembly (FO-4, Item 46) and disconnect hose (FO-4, Item 45).
107. Install dust cap on male end of hose (FO-4, Item 45) and dust plug in the tee assembly (FO-4, Item 46).
108. Remove tee assembly (FO-4, Item 46) from gate valves (FO-4, Items 5 and 47).
109. Install dust caps and dust plugs in tee assembly (FO-4, Item 46) and gate valves (FO-4, Items 5 and 47).

DISPENSING LINE EVACUATION-CONTINUED

110. Disconnect hose (FO-4, Item 48) from gate valve (FO-4, Item 47) and flowmeter (FO-4, Item 49).
111. Install cap on gate valve (FO-4, Item 47), and place plug on end of hose. (FO-4, Item 48).
112. Roll hose (FO-4, Item 48) to flowmeter (FO-4, Item 49).
113. Install dust plug in flowmeter (FO-4, Item 49) inlet and dust cap on hose (FO-4, Item 48).
114. Close gate valve (FO-4, Item 51).
115. Disconnect hose (FO-4, Item 50) from the outlet side of the flowmeter (FO-4, Item 49) and gate valve (FO-4, Item 51).
116. Install dust cap on flowmeter (FO-4, Item 49) outlet side and dust cap on hose (FO-4, Item 50).
117. Roll hose (FO-4, Item 50) towards gate valve (FO-4, Item 51).
118. Install dust cap on hose (FO-4, Item 50) and dust plug on gate valve (FO-4, Item 51).
119. Disconnect gate valve (FO-4, Item 51) from tee assembly (FO-4, Item 52) and install dust plug and dust cap.
120. Disconnect gate valves (FO-4, Items 14, 15, 16, 17, 18 and 19) from tee assembly (FO-4, Items 52, 55, 58, 61, 64, and 67).
121. Lift tee assembly (FO-4, Item 52) and disconnect hose (FO-4, Item 53).
122. Install dust plug and dust cap in hose (FO-4, Item 53) and dust cap tee assembly (FO-4, Item 52).
123. Roll hose (FO-4, Item 53) toward male end.
124. Disconnect and roll each hose (FO-4, Items 54, 56, 57, 59, 60, 62, 63, 65 and 66) female end to male end throughout the dispensing line to the last tee valve assembly (FO-4, Item 67).
125. Disconnect and remove tee assemblies (FO-4, Items 52, 55, 58, 61, 64 and 67) and install dust caps and dust plugs as each component is disconnected.
126. Disconnect reducer (FO-4, Item 69) from tee assembly (FO-4, Item 67).
127. Disconnect hose (FO-4, Item 68) from reducer (FO-4, Item 69).
128. Disconnect hose (FO-4, Item 68) from the gate valve (FO-4, Item 70).
129. Disconnect gate valve (FO-4, Item 70) from pressure regulator (FO-4, Item 72).
130. Install dust plug and dust cap on gate valve (FO-4, Item 70).
131. Disconnect reducer (FO-4, Item 71) from pressure regulator (FO-4, Item 72).
132. Install dust cap and dust plug on reducer (FO-4, Item 71).
133. Install dust plug on the pressure regulator (FO-4, Item 72).
134. Disconnect hose (FO-4, Item 73) from reducer (FO-4, Item 71).
135. Install dust cap on the reducer (FO-4, Item 71).
136. Roll hose (FO-4, Item 73) toward hose (FO-4, Item 74).
137. Disconnect hose (FO-4, Item 73) from next section of hose (FO-4, Item 74) and install dust caps on hoses (FO-4, Items 73 and 74).
138. Disconnect hose (FO-4, Item 74) from valved dry-break tee assembly (FO-4, Item 222).
139. Lift hose (FO-4, Item 74) toward valved dry-break tee assembly (FO-4, Item 222).
140. Install dust plug on hose (FO-4, Item 74) and tee assembly (FO-4, Item 222).

DISPENSING LINE EVACUATION-CONTINUED

N

Some trapped fuel will escape from nozzle.

141. Place a drain pan under the 1.5 in. nozzle (FO-4, Item 75) connection to catch fuel when 1.5 in. nozzle (FO-4, Item 75) is removed.
142. Hold the dispensing end of the 1.5 in. nozzle (FO-4, Item 75) down over the drain pan.
143. Close the valve on the valve assembly, ball, 2-in QDISC (FO-4, Item 76) and separate the 1.5 in. nozzle (FO-4, Item 75) slowly from the valved dry-break coupling (FO-4, Item 76).
144. Disconnect hose (FO-4, Item 77) from the valved dry-break coupling (FO-4, Item 76).
145. Install dust caps and plugs on hose (FO-4, Item 77) and valved dry-break coupling (FO-4, Item 76).
146. Roll hose (FO-4, Item 77) toward the valved dry-break tee assembly (FO-4, Item 222).

N

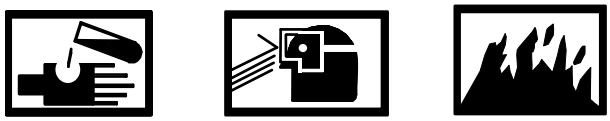
Open one end of hose to release air while rolling. Cap hose when complete.

147. Close the valve on the valved dry-break tee assembly (FO-4, Item 222) and the hose (FO-4, Item 77) where the hose (FO-4, Item 77) connects.
148. Close the valve on the valved dry-break tee assembly (FO-4, Item 74) and hose (FO-4, Item 78) where the hose (FO-4, Item 78) connects.
149. Disconnect hose (FO-4, Item 78) from valved dry-break tee assembly (FO-4, Item 222).
150. Lift hose (FO-4, Item 78) toward valved dry-break tee assembly (FO-4, Item 79).
151. At the hose couplings (FO-4, Items 78 and 80) close both valves on the hoses (FO-4, Items 78 and 80).
152. Disconnect hoses (FO-4, Items 78 and 80).
153. Roll hose (FO-4, Item 80) toward valved dry-break tee assembly (FO-4, Item 79).
154. At last valved dry-break tee assembly (FO-4, Item 79) on the dispensing line, close valve on valved dry-break tee assembly (FO-4, Item 79) and hose (FO-4, Item 80) valved dry-break.
155. Disconnect hose (FO-4, Item 77) from valved dry-break tee assembly (FO-4, Item 222).
156. Close valve on valved dry-break tee assembly (FO-4, Item 79) and disconnect hose (FO-4, Item 81).
157. Lift hose (FO-4, Item 81) from valved dry-break tee assembly (FO-4, Item 79) toward end of hose connected to tanker.
158. Disconnect hose (FO-4, Item 81) from tanker.

END OF TASK

SUCTION LINE EVACUATION

WARNING



CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

1. Connect a 6 in male to 4 in male reducer (FO-4, Item 82) at the end of the tee assembly (FO-4, Item 122).
2. Ensure gates valves (FO-4, Items 1, 2, 3 and 4) are closed prior to defueling process.
3. Remove hose from tanker and connect to 6 in male to 4 in male reducer (FO-4, Item 82). Use the technical manual defueling instructions for the tanker to start evacuation of the suction line.
4. Close suction manifold gate valve on discharge 600 GPM pumping assembly (FO-4, Item 11).
5. After defueling process disconnect male end of suction hose (FO-4, Item 83) from suction manifold of the distribution 600 GPM pumping assembly (FO-4, Item 11). Install dust cap on hose (FO-4, Item 83).
6. Install plug on distribution 600 GPM pumping assembly (FO-4, Item 11).
7. Disconnect hoses (FO-4, Items 83 to 87) and install dust cap and plug.
8. Lift at hose coupling and disconnect hose (FO-4, Item 87) from gate valve (FO-4, Item 88). Install dust plug in hose (FO-4, Item 87).
9. Close gate valve (FO-4, Item 88) at tee assembly (FO-4, Item 89) on discharge side of fuel tank number 4.
10. Disconnect tee assembly (FO-4, Item 89) from gate valve (FO-4, Item 88).
11. Disconnect hoses (FO-4, Items 90, 91, 92, 93, 94, 95, 96, 97, 98, and 99) from tee assemblies (FO-4, Items 89 and 100).
12. Install dust plugs and dust caps on each hose (FO-4, Items 90 - 99) when disconnected.
13. Install dust caps and dust plugs on tee assemblies (FO-4, Items 89 and 100).
14. Disconnect hoses (FO-4, Items 101, 102, 103, 104, 105, 106, 107, 108, 109 and 110) from tee assemblies (FO-4, Items 100 and 111).
15. Install dust plugs and dust caps as each hose (FO-4, Items 101 - 110) when disconnected.
16. Install dust caps on tee assemblies (FO-4, Items 100 and 111).
17. Disconnect hose (FO-4, Items 112, 113, 114, 115, 116, 117, 118, 119, 120, and 121) from tee assemblies (FO-4, Items 111 and 122).
18. Install dust plugs and dust caps as each hose (FO-4, Items 112 - 121) are disconnected.
19. Install dust caps and dust plugs on tee assemblies (FO-4, Items 111 and 122).
20. Stop defueling procedure per tanker technical manual instructions and disconnect hose from tanker.
21. Disconnect tee assembly (FO-4, Item 122) from 6 in. male to 4 in. male reducer (FO-4, Item 82).

SUCTION LINE EVACUATION -CONTINUED

22. Install dust caps and dust plug on tee assembly (FO-4, Item 122) and 6 in. female to 4 in. male reducer (FO-4, Item 82).

N

Some trapped fuel will escape from nozzle.

23. Disconnect gate valve (FO-4, Item 1) from tee assembly (FO-4, Item 82).
24. Install dust plug on tee assembly (FO-4, Item 122).
25. At gate valve (FO-4, Item 1) for fuel tank 1, lift gate valve (FO-4, Item 1) draining fuel toward fuel tank.
26. Disconnect gate valve (FO-4, Item 1) from hose (FO-4, Item 123).
27. Install dust plug in hose (FO-4, Item 123) and dust cap and dust plug in gate valve (FO-4, Item 1).
28. Lift hose (FO-4, Item 123) towards (FO-4, Item 124), draining fuel from hose (FO-4, Item 123).
29. Disconnect hose (FO-4, Item 123) from hose (FO-4, Item 124). Install dust cap on hose (FO-4, Item 123) and install dust plug in hose (FO-4, Item 124).
30. Lift hose (FO-4, Item 124) towards next hose (FO-4, Item 125), draining fuel from hose (FO-4, Item 124).
31. Disconnect hose (FO-4, Item 124) from hose (FO-4, Item 125).
32. Lift hose (FO-4, Item 125) and drain fuel in hose (FO-4, Item 125) into fuel tank.
33. Disconnect hose (FO-4, Item 125) from tank elbow (FO-4, Item 126).
34. Install dust plug in tank elbow (FO-4, Item 126) and dust cap on hose (FO-4, Item 125).
35. Repeat steps 24- 33 for fuel tanks 2 through 4.

END OF TASK

RECEIVING LINE EVACUATION

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

1. Connect a 6M to 4M reducer (FO-4, Item 127) at the end of the receiving line. Use the technical manual defueling instructions for the tanker to start evacuation of the receiving line.
2. Close gate valve (FO-4, Item 128) on the receipt side of fuel tank 1.
3. Close gate valve (FO-4, Item 129) on the receipt side of fuel tank 2.
4. Close gate valve (FO-4, Item 130) on the receipt side of fuel tank 3.
5. Close gate valve (FO-4, Item 131) on the receipt side of fuel tank 4.

N

To drain additives and fuel from fuel additive injector use purging procedures in TM 10-4930-364-13&P (WP 0005) while receiving line evacuation is in progress.

6. Open gate valve (FO-4, Item 132).
7. Open gate valve (FO-4, Item 133).
8. Open gate valve (FO-4, Item 134).
9. Open gate valves (FO-4, Items 135 and 137).
10. Using technical manual procedures for tanker start evacuating the receiving line from adapter (FO-4, Item 127).
11. Disconnect D-1 nozzle (FO-4, Item 226) from inline strainer (FO-4, Item 227).
12. Disconnect inline strainer (FO-4, Item 227) from butterfly valve (FO-4, Item 149).
13. Lift hose at the receiving manifold (FO-4, Item 141) and disconnect butterfly valve (FO-4, Item 140). Install dust caps and plugs for butterfly valve (FO-4, Item 140).
14. Lift hose (FO-4, Item 142), draining fuel while moving to the next hose (FO-4, Item 143).
15. Disconnect hose (FO-4, Item 142) and install dust plugs and dust caps in hose (FO-4, Item 142).
16. Continue lifting, draining and disconnecting hoses (FO-4, Items 143-147) until all hoses are disconnected and dust caps and dust plugs are installed.
17. Disconnect hose (FO-4, Item 147) from tee assembly (FO-4, Item 148).
18. Install dust plug in female end of tee assembly (FO-4, Item 148).
19. Disconnect D-1 nozzle (FO-4, Item 228) from inline strainer (FO-4, Item 229).
20. Disconnect inline strainer (FO-4, Item 227) from butterfly valve (FO-4, Item 149).
21. Lift hose (FO-4, Item 150) and disconnect butterfly valve (FO-4, Item 149).

RECEIVING LINE EVACUATION-CONTINUED

22. Disconnect D-1 nozzle
23. Install dust caps and plugs on butterfly valve (FO-4, Item 149).
24. Lift hose (FO-4, Item 150), draining fuel to the next hose (FO-4, Item 151).
25. Disconnect hose (FO-4, Item 150) and install dust plug and dust cap in hose.
26. Continue lifting, draining and disconnecting hoses (FO-4, Items 151-156) until all hoses (FO-4, Items 151-156) are disconnected and dust caps and dust plugs are installed.
27. Disconnect hose (FO-4, Item 157) from tee assembly (FO-4, Item 148).
28. Install dust cap on male end of tee assembly (FO-4, Item 148).
29. Install dust plug in female end of hose (FO-4, Item 157).
30. Disconnect hose (FO-4, Item 157) from reducer (FO-4, Item 158).
31. Install dust cap on male end of hose (FO-4, Item 157).
32. Disconnect reducer (FO-4, Item 158) from tee assembly (FO-4, Item 159).
33. Install dust caps and plugs on reducer (FO-4, Item 158) and dust plug in tee assembly (FO-4, Item 159).
34. Disconnect D-1 nozzle (FO-4, Item 230) from inline strainer (FO-4, Item 231).
35. Disconnect inline strainer (FO-4, Item 231) from butterfly valve (FO-4, Item 160).
36. At the receiving manifold, lift hose (FO-4, Item 161) and disconnect butterfly valve (FO-4, Item 160).
37. Install dust caps and plugs on butterfly valve (FO-4, Item 160).
38. Lift hose (FO-4, Item 161), draining fuel to the next hose (FO-4, Item 162).
39. Disconnect hose (FO-4, Item 161) and install dust plugs and dust caps in hose.
40. Continue lifting, draining and disconnecting hoses (FO-4, Items 162-167) until all hoses (FO-4, Items 162- 167) are disconnected, and dust caps and dust plugs are installed.
41. Disconnect hose (FO-4, Item 167) from reducer (FO-4, Item 168).
42. Install dust cap on hose (FO-4, Item 167) and dust plug on reducer (FO-4, Item 168).
43. Disconnect reducer (FO-4, Item 168) from tee assembly (FO-4, Item 159).
44. Install dust cap on reducer (FO-4, Item 168) and dust plug on tee assembly (FO-4, Item 159).
45. Disconnect tee assembly (FO-4, Item 159) from hose (FO-4, Item 169).
46. Install dust cap on tee assembly (FO-4, Item 159).
47. Close suction valve on receiving 600 GPM pumping assembly (FO-4, Item 171).
48. Disconnect hose (FO-4, Item 170) from suction port of receiving 600 GPM pumping assembly (FO-4, Item 171).
49. Install dust plug and dust cap on hose (FO-4, Item 170) and dust plug in suction port on receiving 600 GPM pumping assembly (FO-4, Item 171).
50. Disconnect hose (FO-4, Item 170) from hose (FO-4, Item 169). Install dust plug and dust cap on hoses (FO-4, Items 169 and 170).
51. Close discharge valve on receiving 600 GPM pumping assembly (FO-4, Item 171).
52. Disconnect hose (FO-4, Item 172) from discharge manifold of receiving 600 GPM pumping assembly (FO-4, Item 171).

RECEIVING LINE EVACUATION-CONTINUED

53. Install dust plug and dust cap on hose (FO-4, Item 172) and receiving 600 GPM pumping assembly (FO-4, Item 171).
54. Roll hose (FO-4, Item 172) from female end to male end of the hose (FO-4, Item 173).
55. At hose connection, disconnect hose (FO-4, Item 172) from hose (FO-4, Item 173) and install dust plug and dust cap hoses (FO-4, Items 172 and 173).
56. Roll next section of hose (FO-4, Item 173) to the gate valve (FO-4, Item 132).
57. Close gate valve (FO-4, Item 132), then disconnect and install dust cap on hose (FO-4, Item 173).
58. Disconnect gate valve (FO-4, Item 132) from flowmeter (FO-4, Item 174) inlet port.
59. Install dust cap and dust plug in flowmeter (FO-4, Item 174) and gate valve (FO-4, Item 132).
60. Disconnect hose (FO-4, Item 175) at flowmeter (FO-4, Item 174) outlet.
61. Roll hose (FO-4, Item 175) to tee assembly (FO-4, Item 176).
62. Disconnect hose (FO-4, Item 175) from tee assembly (FO-4, Item 176).
63. Install dust plug on hose (FO-4, Item 175) and dust plug in the tee assembly (FO-4, Item 176).

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Once fuel additive injector purging process has completed and all additive and fuel has been purged from the fuel additive injector assembly (FO-4, Item 136) and discharge lines are purged, prepare injector for storage.

64. Close gate valve (FO-4, Item 135) on the input side of the fuel additive injection assembly (FO-4, Item 136).
65. Close gate valve (FO-4, Item 137) on the output side of the fuel additive injection assembly (FO-4, Item 136).
66. Lift tee assembly (FO-4, Item 176) and disconnect gate valves (FO-4, Items 133 and 135).
67. Install dust plug in the gate valve (FO-4, Item 133) and dust cap on the tee assembly (FO-4, Item 176).
68. Disconnect the hose (FO-4, Item 138) from the gate valve (FO-4, Item 135) and from the input side of the fuel additive injection assembly (FO-4, Item 136).
69. Disconnect the hose (FO-4, Item 139) from the gate valve (FO-4, Item 137) and on the output side of the fuel additive injection assembly (FO-4, Item 136).
70. Install dust caps and dust plugs on fuel additive injection assembly (FO-4, Item 136), gate valves (FO-4, Items 136 and 137) and hoses (FO-4, Item 138 and 139).
71. Using a forklift remove fuel additive injection assembly (FO-4, Item 136) from the system and store in appropriate container.
72. Roll discharge hoses (FO-4, Items 138 and 139) and store in appropriate container.
73. Install dust plug in the gate valve (FO-4, Item 133) and dust cap on the tee assembly (FO-4, Item 176).
74. Disconnect gate valve (FO-4, Item 133) from hose (FO-4, Item 177).
75. Install dust cap on the gate valve (FO-4, Item 133) and dust plug in hose (FO-4, Item 177).
76. Disconnect gate valve (FO-4, Item 135) from tee assembly (FO-4, Item 176) and install dust cap on gate valve (FO-4, Item 135) and dust plug in tee assembly (FO-4, Item 176).

RECEIVING LINE EVACUATION-CONTINUED

77. Roll hose (FO-4, Item 177) from female end to male end of the hose to the next hose (FO-4, Item 178).
78. Disconnect hose (FO-4, Item 177) from hose (FO-4, Item 178) and install dust plug and dust cap in hoses (FO-4, Items 177 and 178).
79. Roll hose (FO-4, Item 178) from female end to male end of the hose to the next hose (FO-4, Item 179) and install dust plug and dust cap in hoses (FO-4, Items 178 and 179).
80. Roll hose (FO-4, Item 179) from female to male end of the hose to the next hose (FO-4, Item 180) and install dust plug and dust cap in hoses (FO-4, Items 179 and 180).
81. Roll hose (FO-4, Item 180) from female to male end of the hose to gate valve (FO-4, Item 134).
82. Disconnect hose (FO-4, Item 180) from gate valve (FO-4, Item 134) and install dust cap on hose and dust plug in gate valve (FO-4, Item 134).
83. Disconnect gate valve (FO-4, Item 134) from tee assembly (FO-4, Item 181) and install dust cap on gate valve and dust plug in tee assembly (FO-4, Item 181).
84. Disconnect gate valve (FO-4, Item 137) from tee assembly (FO-4, Item 181) and install dust cap on gate valve (FO-4, Item 137) and dust plug in tee assembly (FO-4, Item 181).
85. Disconnect tee assembly (FO-4, Item 181) from hose (FO-4, Item 182) and install dust plug on tee assembly (FO-4, Item 181) and dust plug in hose (FO-4, Item 182).
86. Roll hose (FO-4, Item 182) from female end toward male end towards tee assembly (FO-4, Item 183).
87. Disconnect hose (FO-4, Item 182) from tee assembly (FO-4, Item 183).
88. Install dust cap on hose (FO-4, Item 182) and dust plug in tee assembly (FO-4, Item 183).
89. Disconnect tee assembly (FO-4, Item 183) from gate valve (FO-4, Item 184).
90. Install dust cap on tee assembly (FO-4, Item 183) and dust plug in gate valve (FO-4, Item 184).
91. Disconnect gate valve (FO-4, Item 184) from recirculation hose (FO-4, Item 185) install dust plug in hose (FO-4, Item 185) and dust cap on gate valve (FO-4, Item 184).
92. Roll hose (FO-4, Item 185) from female end toward male end of hose lifting and disconnecting at the hose coupling to the next hose (FO-4, Item 186).
93. Install dust plug and dust cap as hose (FO-4, Item 186) is disconnected.
94. Continue disconnecting recirculation hoses (FO-4, Items 187-193) lifting and disconnecting at each hose coupling. Install dust plugs and dust cap as hoses (FO-4, Items 187-193) are disconnected and until gate valve (FO-4, Item 5) is reached.
95. Disconnect hose (FO-4, Item 193) from gate valve (FO-4, Item 5) and install dust cap on hose and dust plug in gate valve (FO-4, Item 5).
96. Disconnect tee assembly (FO-4, Item 183) from hose (FO-4, Item 194).
97. Install dust cap on tee assembly (FO-4, Item 183) and dust plug in hose (FO-4, Item 194).
98. Roll hose (FO-4, Item 194) from female end to male end.
99. Lift and disconnect hose (FO-4, Item 194) from hose (FO-4, Item 195).
100. Install dust cap on hose (FO-4, Item 194) and dust plug in hose (FO-4, Item 195).
101. Roll hose (FO-4, Item 195) from female end toward male end towards tee assembly (FO-4, Item 196).
102. Lift hose (FO-4, Item 195) and tee assembly (FO-4, Item 196).
103. Disconnect hose (FO-4, Item 195) from tee assembly (FO-4, Item 196).

RECEIVING LINE EVACUATION-CONTINUED

104. Install dust cap on hose (FO-4, Item 195) and dust plug in tee assembly (FO-4, Item 196).
105. Disconnect male end of tee assembly (FO-4, Item 196) from gate valve (FO-4, Item 128) at the inlet to tank number 1.
106. Install dust cap on tee assembly (FO-4, Item 196) and dust plug in gate valve (FO-4, Item 128).
107. Lift and disconnect tee assembly (FO-4, Item 196) from hose (FO-4, Item 197).
108. Install dust plug in hose (FO-4, Item 197) and dust cap on tee assembly (FO-4, Item 196).
109. Roll hoses (FO-4, Items 197 and 198) from female end toward male end, lifting at each coupling.
110. Disconnect the hoses (FO-4, Items 197 and 198) and install dust plugs and dust caps on hoses (FO-4, Items 197 and 198).
111. Lift at the tee assembly (FO-4, Item 199) and disconnect hose (FO-4, Item 200) from tee assembly (FO-4, Item 199). Install dust plug in the female end of the hose (FO-4, Item 200).
112. Install dust cap on tee assembly (FO-4, Item 199).
113. Disconnect tee assembly (FO-4, Item 199) from gate valve (FO-4, Item 129). Install dust cap on tee assembly (FO-4, Item 200).
114. Install dust plug in gate valve (FO-4, Item 129) at the inlet line of tank number 2.
115. Roll hoses (FO-4, Items 200 and 201) from female end toward male end by lifting at each coupling.
116. Disconnect the hoses (FO-4, Items 200 and 201) and install dust plugs and dust caps on hoses (FO-4, Items 200 and 201).
117. Lift at the tee assembly (FO-4, Item 202) and disconnect hose (FO-4, Item 201) from tee assembly (FO-4, Item 202).
118. Install dust cap hose (FO-4, Item 201) and install dust plug in tee assembly (FO-4, Item 202).
119. Disconnect tee assembly (FO-4, Item 202) from gate valve (FO-4, Item 130). Install dust cap on tee assembly (FO-4, Item 202).
120. Install dust plug in gate valve (FO-4, Item 130) at the inlet line of tank number 3.
121. Lift tee assembly (FO-4, Item 202) and disconnect tee assembly (FO-4, Item 202) from hose (FO-4, Item 203).
122. Install dust plug in hose (FO-4, Item 203) and dust cap on tee assembly (FO-4, Item 202).
123. Roll hoses (FO-4, Items 203 and 204) from female end toward male end, lifting at each coupling.
124. Disconnect the hoses (FO-4, Items 203 and 204) and install dust plugs and dust caps on hoses (FO-4, Items 203 and 204).
125. Lift at the tee assembly (FO-4, Item 205) and disconnect hose (FO-4, Item 204) from tee assembly (FO-4, Item 205).
126. Install dust cap on hose (FO-4, Item 204) and install dust plug in tee assembly (FO-4, Item 205).
127. Disconnect tee assembly (FO-4, Item 205) from gate valve (FO-4, Item 131).
128. Install dust cap on tee assembly (FO-4, Item 205) and dust plug in gate valve (FO-4, Item 131) at the inlet line of tank number 4.
129. Lift tee assembly (FO-4, Item 205), and disconnect 6M to 4M reducer (FO-4, Item 127).
130. Stop defueling procedures per tanker technical manual.
131. Disconnect tanker hose from 6M to 4M reducer (FO-4, Item 127).

RECEIVING LINE EVACUATION-CONTINUED

132. Install dust plugs and dust caps on tee assembly (FO-4, Item 205) and 6M to 4M reducer (FO-4, Item 127).
133. At the gate valve (FO-4, Item 128) for the receiving side of tank number 1, lift gate valve (FO-4, Item 128) and drain fuel toward fuel tank.
134. Disconnect hose (FO-4, Item 206) from gate valve (FO-4, Item 128). Install dust plug in hose (FO-4, Item 206) and dust cap on gate valve (FO-4, Item 128).
135. Lift hose (FO-4, Item 206) towards hose (FO-4, Item 207).
136. Disconnect hose (FO-4, Item 206) from hose (FO-4, Item 207).
137. Install dust cap on hose (FO-4, Item 206) and dust plug in hose (FO-4, Item 207).
138. Roll hose (FO-4, Item 207) towards tank hose (FO-4, Item 208).
139. Install dust cap on hose (FO-4, Item 207) and dust plug in hose (FO-4, Item 208).
140. Lift hose (FO-4, Item 208) toward fuel tank and disconnect hose (FO-4, Item 208) from tank elbow (FO-4, Item 209).
141. Install dust cap on hose (FO-4, Item 208) and dust plug in tank elbow (FO-4, Item 209).
142. At the gate valve (FO-4, Item 129) for the receiving side of tank number 2, lift gate valve (FO-4, Item 129) and drain fuel toward fuel tank.
143. Disconnect hose (FO-4, Item 210) from gate valve (FO-4, Item 129).
144. Install dust plug in hose (FO-4, Item 210) and dust cap on gate valve (FO-4, Item 129).
145. Roll hose (FO-4, Item 210) towards hose (FO-4, Item 211).
146. Disconnect hose (FO-4, Item 210) from hose (FO-4, Item 211).
147. Install dust cap on hose (FO-4, Item 210) and dust plug in hose (FO-4, Item 211).
148. Roll hose (FO-4, Item 211) towards hose (FO-4, Item 212).
149. Disconnect hose (FO-4, Item 211) from hose (FO-4, Item 212).
150. Install dust cap on hose (FO-4, Item 211) and dust plug in hose (FO-4, Item 212).
151. Lift hose (FO-4, Item 212) toward fuel tank and disconnect hose (FO-4, Item 212) from tank elbow (FO-4, Item 213).
152. Install dust cap on hose (FO-4, Item 212) and dust plug in tank elbow (FO-4, Item 213).
153. At the gate valve (FO-4, Item 130) for the receiving side of tank number 3, lift gate valve (FO-4, Item 130) and drain fuel toward fuel tank.
154. Disconnect hose (FO-4, Item 214) from gate valve (FO-4, Item 130).
155. Install dust plug in hose (FO-4, Item 214) and dust cap on gate valve (FO-4, Item 130).
156. Roll hose (FO-4, Item 214) towards hose (FO-4, Item 215).
157. Disconnect hose (FO-4, Item 214) from hose (FO-4, Item 215).
158. Install dust cap on hose (FO-4, Item 214) and dust plug in hose (FO-4, Item 215).
159. Roll hose (FO-4, Item 215) towards hose (FO-4, Item 216).
160. Disconnect hose (FO-4, Item 215) from hose (FO-4, Item 216).
161. Install dust cap on hose (FO-4, Item 215) and dust plug in hose (FO-4, Item 216).
162. Lift hose (FO-4, Item 216) toward fuel tank and disconnect hose (FO-4, Item 216) from tank elbow (FO-4, Item 217).

RECEIVING LINE EVACUATION-CONTINUED

163. Install dust cap on hose (FO-4, Item 216) and dust plug in tank elbow (FO-4, Item 217).
164. At the gate valve (FO-4, Item 131) for the receiving side of tank number 4, lift gate valve (FO-4, Item 131) and drain fuel toward fuel tank.
165. Disconnect hose (FO-4, Item 218) from gate valve (FO-4, Item 131).
166. Install dust plug in hose (FO-4, Item 218) and dust cap on gate valve (FO-4, Item 131).
167. Roll hose (FO-4, Item 218) towards hose (FO-4, Item 219).
168. Disconnect hose (FO-4, Item 218) from hose (FO-4, Item 219).
169. Install dust cap on hose (FO-4, Item 218) and dust plug in hose (FO-4, Item 219).
170. Roll hose (FO-4, Item 219) towards hose (FO-4, Item 220).
171. Disconnect hose (FO-4, Item 219) from hose (FO-4, Item 220).
172. Install dust cap on hose (FO-4, Item 219) and dust plug in hose (FO-4, Item 220).
173. Lift hose (FO-4, Item 220) toward fuel tank and disconnect hose (FO-4, Item 220) from tank elbow (FO-4, Item 221).
174. Install dust cap on hose (FO-4, Item 220) and dust plug in tank elbow (FO-4, Item 221).

END OF TASK

REPACKING FSSP SYSTEM

Refer to WP 0002 and SSI for repacking of components.

END OF TASK

END OF WORK PACKAGE

WET WING DEFUELING ASSEMBLY
OPERATIONS – PREPARATION FOR USE

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(3) Petroleum Supply Specialist 92F
(4) Aircrew members

Materials/Parts

Apron, utility (WP 0165, Item 2)
Wet wing defueling assembly

References

FM 10-67-1
Joint Petroleum Logistics Planning Guide

ASSEMBLE WET WING DEFUELING ASSEMBLY

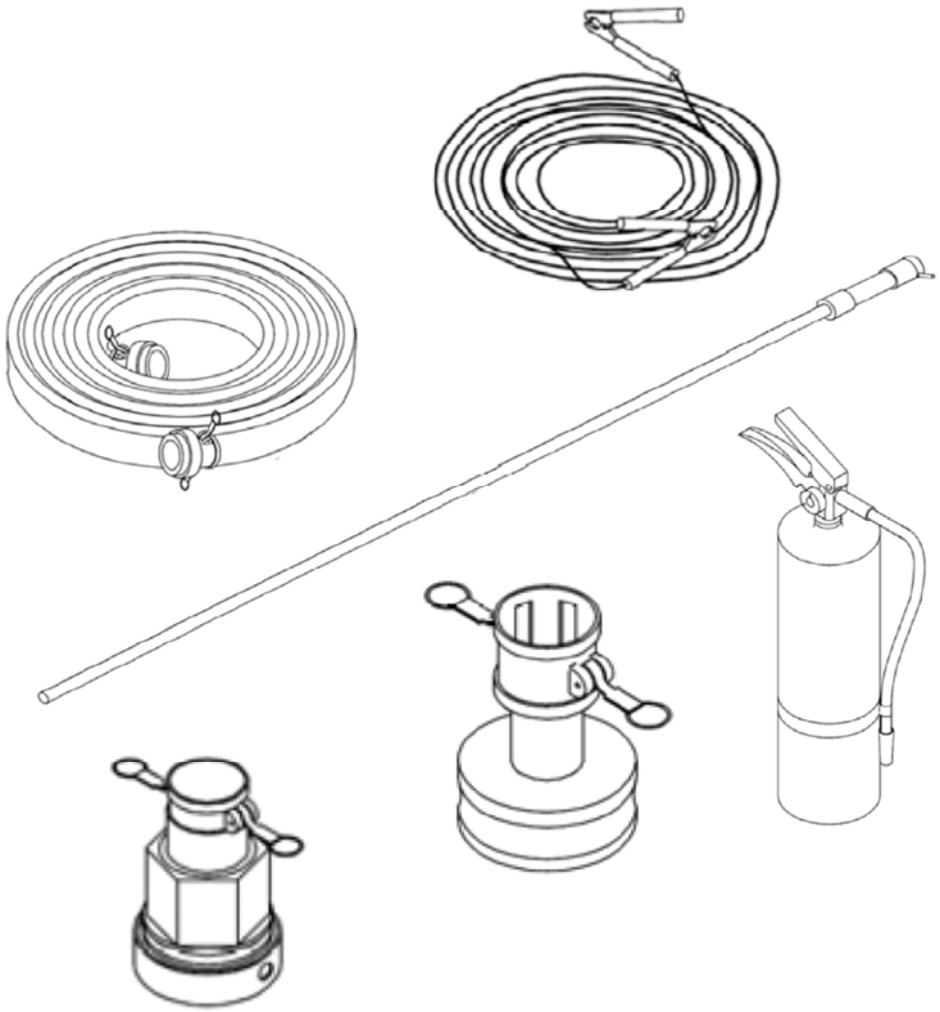

Figure 1. Wet Wing Defueling Assembly.

ASSEMBLE WET WING DEFUELING KIT-CONTINUED

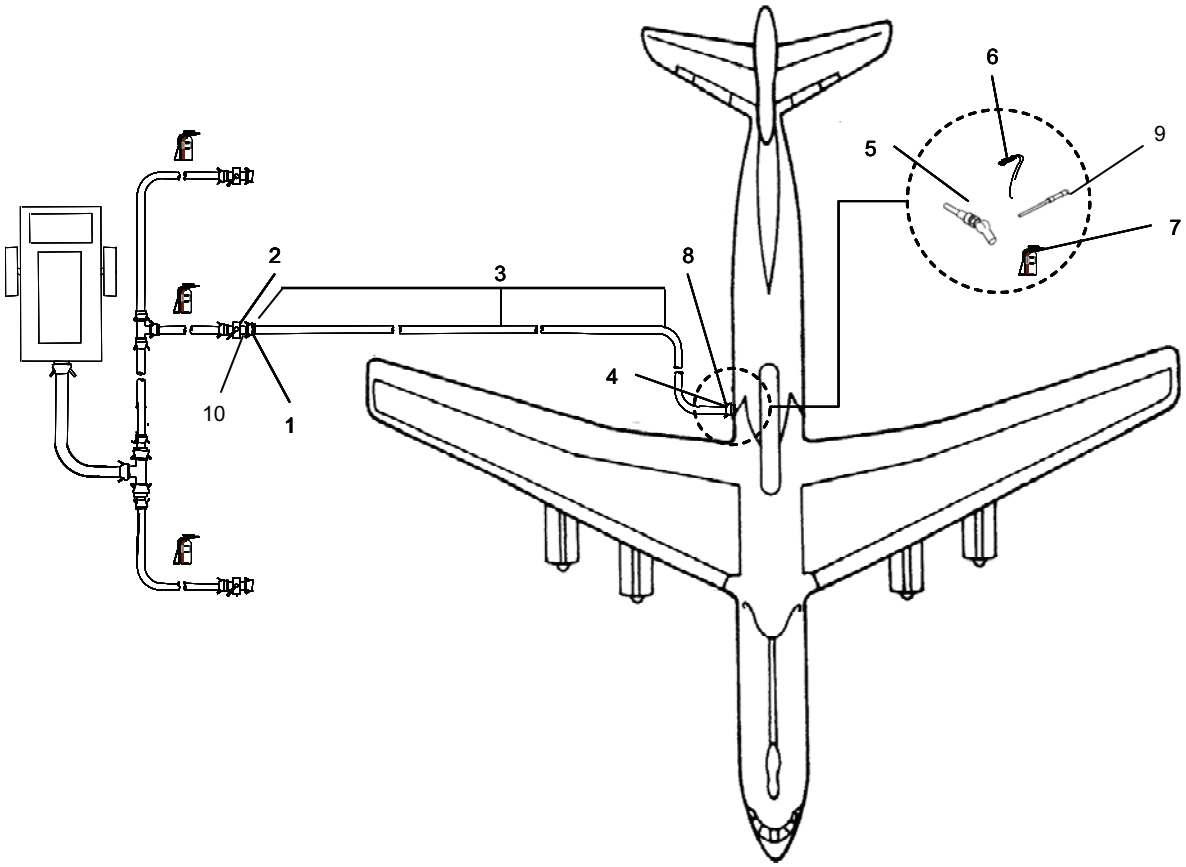

Figure 2. Wet Wing Defueling Assembly.

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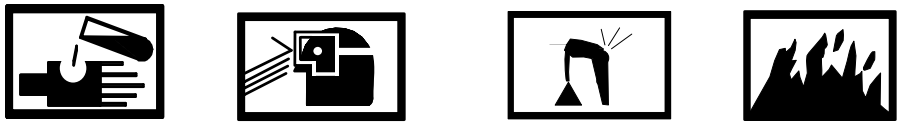

CHEMICAL **EYE PROTECTION** **HEAVY OBJECTS** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging. When lifting 6 inch hoses, a two-man lift is required to avoid injury to personnel.

ASSEMBLE WET WING DEFUELING KIT - CONTINUED

A I N

Per FM 10-67-1 do not use the 350 GPM pump or higher in wet wing defueling operations due to the excessive suction created which could collapse the aircraft fuel manifold. Use the fuel booster pumps on board the aircraft to transfer fuel into the 800K FSSP.

1. Remove the following wet wing defueling assembly components (Figure 1) from TRICON container 4, Intermediate Case 1, and place near defueling site:
   a. Fire extinguisher (1 ea)
   b. 4 in. male X 3 in. unisex adapter (1 ea)
   c. 4 in. female X 3 in. unisex adapter (1 ea)
   d. Ground wire assembly 100-ft (2 ea)
   e. 3x 50 ft discharge hose assembly (4 ea)
2. Remove one 4 in. male X 3 in. unisex adapter (Figure 2, Item 1) from the wet wing defueling assembly.
3. Close and disconnect the D-1 Nozzle from the receipt line strainer assembly (Figure 2, Item 2).
4. Remove four 3 in. X 50 ft. discharge hose from TRICON container 4.
5. Connect the 4 in. male X 3 in. unisex adapter (Figure 2, Item 1) to the strainer assembly (Figure 2, Item 2).
6. Connect one of the 3 in. X 50 ft. discharge hose (Figure 2, Item 3) to the 4 in. male X 3 in. unisex adapter (Figure 2, Item 1).
7. Connect the three remaining 3 in. X 50 ft. discharge hoses (Figure 2, Item 3) together towards the aircraft being defueled.
8. Connect the male end of the 3 in. X 50 ft. discharge hose (Figure 2, Item 3) to the 4 in. female X 3 in. unisex adapter (Figure 2, Item 4).
9. Connect the quick disconnect nozzle assembly D-1 nozzle (Figure 2, Item 5) to the 4 in. female x 3 in. unisex adapter (Figure 2, Item 4).
10. Remove grounding rod and grounding wire from the wet wing defueling kit.
11. Install the ground rod per FM 10-67-1.
12. Attach ground cable clamps (Figure 2, Item 6) to ground rod (Figure 2, Item 9) and aircraft.

N

At least four potassium, stored pressure, dry chemical fire extinguishers are required. These extinguishers must be rated by Underwriter's Laboratory, incorporated at 80-B: C. Use three fire extinguishers from the receipt point.

13. Place and man the fire extinguishers as follows:
    a. One within 50 feet on the side of the operating aircraft engines (C-130 only, APU or GPU).
    b. One within 30 feet of the side of the center point port being used.
    c. One at the receiving point.
    d. One spare (unmanned) within 100 feet of the center point port being used.
14. Bond and connect D-1 nozzle (Figure 2, Item 5) to aircraft fuel port (Figure 2, Item 8).

ASSEMBLE WET WING DEFUELING KIT - CONTINUED

15. Open butterfly valve (Figure 2, Item 10) on receipt line.
16. Notify aircraft personnel to start defueling procedures.

END OF TASK

DISASSEMBLE WET WING DEFUELING KIT

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

1. Defueling operations is complete once aircraft personnel have notified FSSP operators to stop operations.
2. Close butterfly valve (Figure 2, Item 10) on receipt line.
3. Disconnect D-1 nozzle (Figure 2, Item 5) from aircraft fuel port (Figure 1, Item 8) and replace dust covers appropriately.
4. Remove ground cable clamps (Figure 2, Item 6) from the aircraft.
5. Disconnect D-1 nozzle (Figure 2, Item 5) from the 4 in. female X 3 in. unisex adapter (Figure 2, Item 4).
6. Disconnect the 3 in. X 50 ft. discharge hose (Figure 2, Item 3) from the 4 in. female X 3 in. unisex adapter (Figure 2, Item 4).
7. Place dust caps and plugs on the 4 in. female X 3 in. unisex adapter (Figure 2, Item 4) and 3 in. X 50 ft. discharge hose (Figure 2, Item 3).

N

Ensure all fuel is removed from hoses prior to rolling. If necessary refer to the displacement and evacuation procedures in WP 0006.

8. Disconnect remaining 3 in. X 50 ft. discharge hoses (Figure 2, Item 3).
9. Disconnect the 3 in. X 50 ft. discharge hose (Figure 2, Item 3) from the 4 in. male X 3 in. unisex adapter (Figure 2, Item 1).
10. Place dust caps on the 3 in. X 50 ft. discharge hose and the 4 in female X 3 in. unisex adapter (Figure 2, Item 1).
11. Disconnect the 4 in. male X 3 in. unisex adapter (Figure 2, Item 1) from the strainer assembly (Figure 2, Item 2).
12. Place dust caps on the 4 in. female X 3 in. unisex adapter (Figure 2, Item 4).

DISASSEMBLE WET WING DEFUELING KIT - CONTINUED

13. Connect D-1 nozzle to the strainer assembly (Figure 2, Item 2).
14. Return and store all components of the wet wing kit to TRICON container 4.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER UNUSUAL CONDITIONS – ENVIRONMENT/WEATHER

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

UNUSUAL ENVIRONMENT/WEATHER

A I N

The FSSP is designed to operate normally within a wide range of climatic conditions. However, some extreme conditions require special operating and servicing procedures to prevent undue loading and excessive wear on the equipment.

1. Operation in extreme heat conditions.

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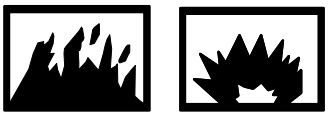

FIRE **EXPLOSION**

Leaking fuel can ignite and cause serious injury to personnel and damage to equipment. Failure to follow procedures could result in serious injury or death to personnel.

When operating the FSSP in temperatures of 125ºF (52ºC) or higher, extra care should be taken to minimize the possibility of fuel fire and explosion. Failure to comply could result in serious injury or death to personnel.

a. Ensure all fittings and hose connections are tight and do not leak fuel.

b. Clean up all spills and drips as they occur to prevent accumulation of explosive fumes from the evaporating fuel.

c. Special hot weather procedures must be followed for operation of the pump assemblies and the filter-separators, which are part of the FSSP. Refer to the appropriate 600 GPM pump/filter-separator technical manuals.

UNUSUAL ENVIRONMENT/WEATHER – CONTINUED

2. Operation in extreme cold conditions.

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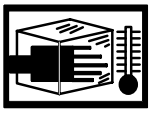


CRYOGENIC

Remove any fuel from exposed skin as soon as possible. Most fuels evaporate very quickly and can quickly lower the temperature of exposed skin until there is a great danger of frost bite. Prevent leakage of fuel onto bare skin of personnel. Failure to follow procedures could result in serious injury or death to personnel.

A I N

When operating the FSSP in temperatures down to -50ºF (-45ºC), extra care should be taken to minimize damage to equipment.

a. Special cold weather procedures must be followed for operation of the pump assemblies and the filter-separators, which are part of the FSSP. Refer to the appropriate 600 GPM pump/filter-separator technical manual.

b. Remove any fuel from exposed skin as soon as possible. Operation under conditions of extreme cold may cause equipment problems due to loss of flexibility. Nozzle seals and coupling face seals are especially subject to damage.

3. Operation in sandy or dusty conditions.

A I N

Accumulation of dust or sand in the filters of the pumping assembly will cause the pumps to overheat and damage the equipment.

a. Clean filters and all other areas of dust and sand accumulation daily.

A I N

Fuel which has been contaminated by dust and sand will severely affect the operation of any engine.

b. Check for dust or sand contaminated fuel.

c. Ensure all hose and piping connections are tight.

d. Ensure the insides of all FSSP components are clean before connecting components during setup or assembly.

e. Check the filter-separator on a more frequent basis to ensure that the filter is working properly to remove dust and sand that may have entered the FSSP. Refer to the appropriate filter-separator technical manual for detailed procedures when using the filter-separator in a dusty and sandy environment.

UNUSUAL ENVIRONMENT/WEATHER – CONTINUED

4. Operation in salt air and sea spray conditions.

A I N

Accumulation of salt can cause corrosion and cause damage to equipment.

a. Clean all exposed surfaces frequently.
b. Rinse all exposed surfaces with fresh water to remove salt.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER UNUSUAL CONDITIONS – DECONTAMINATION PROCEDURES

INITIAL SETUP:

Personnel Required	References
Petroleum Supply Specialist 92F	FM 3-11.4 FM 3-5

INTERIM NUCLEAR, BIOLOGICAL AND CHEMICAL (NBC) DECONTAMINATION PROCEDURES

WARNING

RADIATION **BIOLOGICAL** **CHEMICAL**

In the event equipment has been exposed to nuclear, biological or chemical warfare, the equipment shall be handled with extreme caution and decontaminated in accordance with FM 3-5, NBC Decontamination. Unprotected personnel can experience injury or death if residual toxic agents or radioactive material are present. If equipment is exposed to radioactive, biological or chemical agents, personnel must wear protective mask, hood, and protective over garments, chemical gloves and chemical boots in accordance with MOPP level prescribed by the OIC or NCOIC. MOPP analysis and levels are described in detail in FM 3-11.4, Multiservice Tactics, Techniques and Procedures for Nuclear, Biological and Chemical (NBC) Protection. Personnel should contact a unit that has the capabilities for freshwater wash down. The unit can also assist in the evacuation of soldiers who have been exposed and provide space and shelter for exchanging MOPP suits.

1. Decontaminate equipment per FM 3-5.
2. Perform operational check of all equipment after decontamination.

END OF TASK

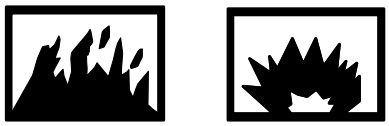
END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER UNUSUAL CONDITIONS – EMERGENCY PROCEDURES - FIRE

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

WARNING



FIRE **EXPLOSION**

Flame shows that a material may ignite and cause burns.

Rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.

EMERGENCY PROCEDURES - FIRE

1. Press the EMERGENCY STOP push button on the pumping assembly. Refer to pumping assembly operator's manual.
2. If possible, close suction and discharge gate valves on the pumping assembly. Refer to pumping assembly operator's manual.
3. Using portable fire extinguishers or available fire fighting equipment, extinguish fire.
4. After the fire is extinguished, check the FSSP for damage caused by fire.
5. Replace any components of the FSSP that are damaged by fire.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER UNUSUAL CONDITIONS – FUEL LEAK DURING OPERATION

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

EMERGENCY PROCEDURES - FUEL LEAK DURING OPERATION

WARNING

FIRE **EXPLOSION** **HIGH PRESSURE**

Leaking fuel can ignite and cause serious injury to personnel and damage to equipment. Failure to follow procedures could result in serious injury or death to personnel.

Escaping fuel under pressure has sufficient force to penetrate the skin, causing serious injury to personnel. Do not approach the leak until all pressure is removed from the system.

Flame shows that a material may ignite and cause burns.

Rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.

1. Press the EMERGENCY STOP push button on the pumping assembly. Refer to pumping assembly operator's manual.
2. Close suction and discharge gate valves on the pumping assembly. Refer to pumping assembly operator's manual.
3. When pressure is relieved, close gate valves on both sides of fuel leak.
4. Repair or replace damaged components, as required, to prevent the leakage of fuel.
5. Clean up fuel spills according to Army/Local procedures. Refer to WP 0013.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATION UNDER UNUSUAL CONDITIONS – FUEL SPILL CONTAINMENT AND CLEANUP

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0162, Item 24)

References

AR 200-1

Personnel Required

Petroleum Supply Specialist 92F

EMERGENCY PROCEDURES - FUEL SPILL CONTAINMENT AND CLEANUP

FUEL SPILL CLEANUPS

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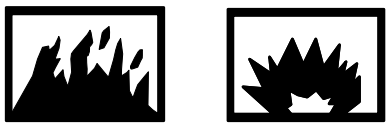
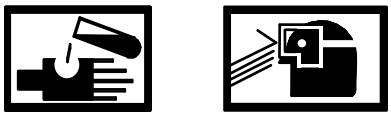


FIRE **EXPLOSION**

Flame shows that a material may ignite and cause burns.

Rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.

WARNING



CHEMICAL **EYE PROTECTION**

1. Army Regulation (AR) 200-1 prescribes Department of the Army (DA) responsibilities, policies and procedures to preserve protect and restore the quality of the environment. It incorporates all applicable statutory and regulatory requirements in the area of hazardous substances spill contingency planning, control and emergency response; solid and hazardous waste management and environmental restoration for Fuel System Supply Point (FSSP) operations. Management of fuel spills, use of the fuel spill control kit, disposal of contaminated kit material and the restoration of the environment after a spill is the responsibility of the installation, activity and unit commander in consultation with AR 200-1 and environmental authorities.
2. Every spill, no matter how small, should be reported by FSSP operators and investigated in accordance with AR 200-1 so that the cause can be determined and future spills prevented. Every spill should be treated as a potential source of soil contamination and fire. Cleanup procedures are described below.

FUEL SPILL CLEANUPS - CONTINUED

3. Detailed instructions must be given by the responsible environmental authority. Each spill must be treated as an individual case because of size, type of fuel involved, wind conditions, weather, equipment available, possible involvement of vehicles and other similar variables. In general, the following are basic actions that should be considered and carried out if spills occur with the FSSP.
4. Start immediate cleanup. A quick cleanup slows down the spread of contamination and saves on cleanup costs. Absorb spilled fuel or allow it to evaporate before using the spill area for operation.

END OF TASK

FUEL SPILL PROCEDURES AND CONTAINMENT

N

Fuel spills are classified by the area covered by the spill. The seriousness of a fuel spill is determined by the area of contact between the fuel, soil and air. It is on or above the surface that a flammable, vapor-air mixture can form and fire can take place. The number of sq ft covered by the spill is more important than the amount of fuel spilled.

1. Determine the size of the fuel spill.
   a. A small priming spill is one that covers less than 18 inches (45.7 cm) in diameter.
   b. A small spill is one that is less than 10 ft. (3.05 m) in diameter or that covers less than 50 sq ft. (4.65 sq m). It is not a continuous spill (tank leak).
   c. A large spill is one that is larger than 10 ft. (3.05 m) in diameter , that covers an area larger than 50 sq ft. (4.65 sq m) or one that is continuous (a tank leak).
2. Perform the following actions for all fuel spills.
   a. Stop the flow of fuel, if possible. Examples of stopping a spill include shutting off the valves in a hoseline and closing secondary containment valves around storage tanks.
   b. Contain the spill. Examples of containing a spill include constructing berms and cut-off trenches and using the fuel spill control kits enclosed oil absorbents. Do not contain gasoline or other volatile chemical spills. Instead, disperse the volatile fuel away from equipment and let it evaporate.
   c. Evacuate personnel from vehicle involved.
   d. Shut down operations in the area of large spills or the whole FSSP, if necessary.
   e. Notify fire fighting and environmental support activities if the spill is serious. Call for help immediately. Once started, fuel fires spread quickly. Reaction speed is the single most important element in fighting a fuel fire successfully.
   f. Check thoroughly for vapors trapped in equipment used in the FSSP, such as pumps or filter-separators, and in the refueled vehicle’s structure if fuel is spilled on or into a vehicle. Be sure vapors have dissipated before the equipment and vehicles are returned to service.
   g. Start immediate cleanup. A quick cleanup slows down the spread of contamination and saves on cleanup costs. Absorb spilled fuel or allow it to evaporate before using the spill area for operation.
3. Perform the following actions for small priming fuel spills.
   a. Use the fuel spill control kits bag of granular absorbent to spread over the spill.
   b. A fireguard should stand by the spill area with a fire extinguisher until the cleanup operation is completed.

FUEL SPILL PROCEDURES AND CONTAINMENT– CONTINUED

4. Perform the following actions for small fuel spills.
    a. Stop operation at the spill site and post a fireguard with a fire extinguisher by the spill.
    b. Use the fuel spill control kits 10 ft. long (3.05 m) enclosed oil absorbents, which are filled with loose absorbent material, to contain the spill by forming a dike around it.
5. Perform the following actions for large fuel spills.
    a. At a permanent installation or large temporary refueling point where there is a fire department or fire brigade, call the firefighters immediately and stop operations in the area. As soon as the fire assistance has been called, the actions described below should be performed as necessary.
    b. If the fuel is MOGAS or JP-4, a large spill should be blanketed with fire extinguisher foam as soon as possible to reduce danger of fire or to put out the fire if one exists.
    c. It may be necessary to have all personnel leave a vehicle if the spill is at or near it. No one other than authorized personnel should move through the spill area. If anyone gets fuel on his clothes, he should take them off and wash them with soap and water. Any person whose clothes are on fire should roll or be rolled on the ground to put out the fire or be wrapped in a blanket to smother the flames.
    d. Mobile refueling equipment may be the largest single source of fuel near the spill. If the fuel spill has not caught fire, starting the engine of a refueler or other vehicle could supply the spark that would ignite the spill or vapors. The decision on what procedure is least hazardous, driving the refueler away or not starting the engine, must be made on the spot by the person in charge. If the vehicle engine is running, normal practice is to drive the vehicle away from the spill unless this would pose an unacceptable risk to the driver.
    e. If an aircraft in the spill area has its engine running at the time of the spill, usually it should lift off out of the spill area. The heat of the engines can cause the spill to ignite. The rotor or prop wash from an aircraft can spread the vapor hazard to an area where ignition sources may be present, thus increasing the danger. It can also cause problems by dissipating fire fighting agents.
6. Clean up small priming fuel spills.
    a. Post a fireguard by the spill area with a fire extinguisher until the cleanup operation is completed.
    b. Use the fuel spill control kits bag of granular absorbent to spread over the spill.
    c. Dig up the absorbent and contaminated soil using the two-piece non-sparking shovel and place the absorbent and soil into plastic disposal bags.
    d. Use tie strips to seal the bags. Store and transport the bags in the 55 gallon drums marked with the “Hazardous Material” caution plate.
7. Clean up small fuel spills.
    a. Post a fireguard by the spill area with a fire extinguisher until the cleanup operation is completed.
    b. Use the fuel spill control kits bag of granular absorbent to spread over the spill.
    c. Use the fuel spill control kits 16 1/2 in. wide X 20 in. long absorbent pads to absorb the fuel, if necessary.
    d. If low flash point fuel, such as JP-4, has been spilled, dig up the absorbent and contaminated soil using the two-piece non-sparking shovel and place them either in the kits 5 gallon pails or into plastic disposal bags.

FUEL SPILL PROCEDURES AND CONTAINMENT – CONTINUED

e. Use tie strips to seal the bags. Store and transport the bags in the 55 gallon drums marked with the “Hazardous Material” caution plate.

8. Clean up large fuel spills.

a. At a permanent installation or large temporary refueling point where there is a fire department or fire brigade fire fighters must be standing by and operations stopped in the area.

b. After the immediate emergency is over, go to the unit’s appropriate response plan document prepared per AR 200-1 for instructions on whom to call.

c. Until cleanup help arrives, it may be best to rope off the area, post a guard, close down nearby refueling operations and allow the spill to evaporate.

d. Use the FSSP fuel spill control kit to contain the spill to the largest extent possible.

e. The spill area should not be used for operations again until it is free of fuel vapors.

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

OPERATOR TROUBLESHOOTING PROCEDURES FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

OPERATOR MAINTENANCE
FSSP MASTER MALFUNCTION/SYMPTOM INDEX

MALFUNCTION/SYMPTOM	TROUBLESHOOTING PROCEDURE
OPERATIONAL CHECKOUT	WP 0014
FSSP Operational Checkout	
PUMPING ASSEMBLY	
Pumping Assembly, 600 GPM, Part Number 600 GPM FPTA	WP 0015
FILTER SEPERATOR ASSEMBLY	
Filter-Separator Assembly, Liquid Fuel, 350 GPM, Part Number MEFS18V350M	WP 0016
COMPONENTS	
Hose Assembly, Discharge, (Dry Break Valve), 2 In. x 50 Ft, Part Number 78009-100, Leaks	WP 0017
Hose Assembly, Discharge, (Dry Break Valve), 3 In. x 50 Ft., Part Number 78010-100, Leaks	WP 0018
Hose Assembly, Suction, 4 In. x 10 Ft., Part Number M370B091A0100A, Leaks	WP 0019
Hose Assembly, Discharge, 4 In. x 25 Ft., Part Number 78007-102, Leaks	WP 0020
Hose Assembly, Suction, 6 In. x 10 Ft., Part Number 301.109, Leaks	WP 0021
Hose Assembly, Discharge, 6 In. x 10 Ft., Part Number 78008-1001, Leaks	WP 0022
Hose Assembly, Discharge, 6 In. x 25 Ft., Part Number 78008-100, Leaks	WP 0023
Hose Assembly, Discharge, 6 In. x 50 Ft., Part Number 78008-101, Leaks	WP 0024
Valve Assembly, Ball, 2 In., Part Number 78048-100, Leaks or Will Not Join With Other Components	WP 0025
Valve Assembly, Butterfly, 4 In., Part Number 78042-100, Leaks or Does Not Operate Properly	WP 0026
Valve Assembly, Gate, 4 In., Part Number 13228E3435, Leaks or Does Not Operate Properly	WP 0027
Valve Assembly, Gate, 6 In., Part Number 13228E3425, Leaks or Does Not Operate Properly	WP 0028
Adapter Assembly, Male Quick Disconnect x 2 In., (Dry Break Valve), Part Number 64020FQ, Leaks or Will Not Connect With Other Components	WP 0029

MALFUNCTION/SYMPTOM	TROUBLESHOOTING PROCEDURE
Adapter Assembly, Female Quick Disconnect x 2 In. (Dry Break Valve), Part Number 64020GQ, Leaks or Will Not Connect With Other Components	WP 0030
Adapter Assembly, Female 3 In. x Female, 3 In. Part Number 60273030SG, Leaks or Will Not Connect with Other Components	WP 0031
Adapter Assembly, Male 3 In. x Male 3 In., Part Number 602830301, Leaks or Will Not Connect With Other Components	WP 0032
Adapter Assembly, Female 4 In. x Female 4 In., Part Number 602740401, Leaks or Will Not Connect With Other Components	WP 0033
Adapter Assembly, Male 4 In. x Male 4 In., Part Number 602840401, Leaks or Will Not Connect with Other Components	WP 0034
Adapter Assembly, Female 4 In. x Male 6 IN., Part Number 435BA-4060-AC, Leaks or Will Not Connect With Other Components	WP 0035
Adapter Assembly, Female 4 In. x Unisex 3 IN., Part Number 64031MQ, Leaks or Will Not Connect With Other Components	WP 0036
Adapter Assembly, Male 4 In. x Unisex 3 IN., Part Number 64031PQ, Leaks or Will Not Connect With Other Components	WP 0037
Reducer Assembly, Female 2 In., x Male 1.5 IN, Part Number 602620151, Leaks or Will Not Connect With Other Components	WP 0038
Reducer Assembly, Female 4 In. x Male 2 IN., Part Number 602640201, Leaks or Will Not Connect With Other Components	WP 0039
Reducer Assembly, Female 4 In. x Male 3 IN., Part Number 602640301, Leaks or Will Not Connect With Other Components	WP 0040
Reducer Assembly, Male 4 In x Female 3 IN., Part Number 602630401, Leaks or Will Not Connect With Other Components	WP 0041
Reducer Assembly, Female 6 In. x Male 4 IN., Part Number 602660401, Leaks or Will Not Connect With Other Components	WP 0042
Tee Assembly, (Dry Break Valve), 2 In., Part Number 64022D, Leaks or Will Not Join With Other Components	WP 0043
Tee Assembly, Female 4 In. x Male 4 In. x Female, 4 In., Part Number 78021-100, Leaks or Will Not Join With Other Components	WP 0044
Tee Assembly, Female 6 In. x Female 6 In. x Male 4 In., Part Number 300.2434, Leaks or Will Not Join With Other Components	WP 0045
Tee Assembly, Male 6 In. x Female 6 In. x Male 4 In., Part Number 78026-100, Leaks or Will Not Join With Other Components	WP 0046
Tee Assembly, Male 6 In. x Female 6 In. x Female 4 In., Part Number 300.2432, Leaks or Will Not Join With Other Components	WP0047
Tee Assembly, Female 6 In. x Female 6 In. x Male 6 In., Part Number 300.2433, Leaks or Will Not Join With Other Components	WP 0048

MALFUNCTION/SYMPTOM	TROUBLESHOOTING PROCEDURE
Tee Assembly, Female 6 In. x Male 6 In. x Female 6 In., Part Number 300.2431, Leaks or Will Not Join With Other Components	WP 0049
Tee Assembly, Female 6 In. x Male 6 In. x Male 6 In., Part Number 78027-100, Leaks or Will Not Join With Other Components	WP 0050
Nozzle Assembly, Fuel and Oil Service, 1 In., W/Pressure Regulator, Part Number 64210, Leaks or Will Not Join With Other Components	WP 0051
Nozzle Assembly, Fuel and Oil Service, 1 In., W/ Pressure Regulator, Part Number 64210, Has Excessive Fuel Discharge Pressure	WP 0052
Nozzle Assembly, Fuel and Oil Service, 1.5 In., Part Number 64199, Leaks or Will Not Join With Other Components	WP 0053
Nozzle Assembly, Closed Circuit Refueling, Part Number 64017B, Leaks or Will Not Join With Other Components	WP 0054
Nozzle Assembly, D-1, Unisex Coupling, 2 In Part Number 64201CF4GHX, Leaks or Will Not Join With Other Components	WP 0055
Nozzle Assembly, D-1, Female, Cam-Lock Coupling 4 In., Part Number 64201CGH2MQ, Leaks or Will Not Join With Other Components	WP 0056
Nozzle Assembly, D-1, Male, Cam-Lock Coupling, 4 In., Part Number 64201CGH2HQ, Leaks or Will Not Join With Other Components	WP 0057
Regulator, Pressure, Female Inlet 2 In., Unisex Outlet 2 In., Part Number 64249, Leaks or Will Not Join With Other Components	WP 0058
Strainer Assembly, In-Line 4 In., Part Number 735SBA4000ASAJ, Leaks or Will Not Join With other Components	WP 0059
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Amount of Fuel Pumped	WP 0060
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Correct Amount of Fuel Pumped	WP 0061
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Fuel Flow	WP0062
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Leaks During Operation	WP 0063
Fuel Additive Injector Assembly, Part Number TPI-4T-4A-1, Will Not Turn	WP 0064
Fuel Tank, Collapsible, BETA, 210K Gal, Part Number GTA-210K	WP 0065
Wet Wing Defueling Kit, Part Number 78029-100, Leaks or Will Not Join With Other Components	WP 0065
Container Cargo, TRICON, Part Number BXTBCTTATPD0003	WP 0067
Container Cargo, ISO 20-Ft, Part Number BX2ACTP01D0000	WP 0068

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FSSP OPERATIONAL CHECKOUT

INITIAL SETUP:

Materials/Parts

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Equipment Conditions

FSSP prepared for use (WP 0005).

Personnel Required

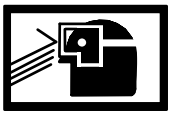
Petroleum Supply Specialist 92F (4)

FUEL SYSTEM SUPPLY POINT (FSSP) OPERATIONAL CHECKOUT

When required, this operational checkout shall be used to verify the repair of assemblies, components or parts of the FSSP. Once completed, return to the associated troubleshooting work package.

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

STEPS

1. Start 600 GPM pumping assembly according to applicable 600 GPM pumping assembly technical manual.
2. Start fuel flow through FSSP (WP 0005).
3. Inspect assembly, component or part that has been repaired, replaced or troubleshoot for serviceability, proper operation and lack of leaks as applicable.

INDICATION/CONDITION

Component, part or system still does not operate correctly or still malfunctions.

CORRECTIVE ACTION

1. Stop fuel flow through FSSP (WP 0005).
2. Shut down 600 GPM pumping assembly according to applicable 600 GPM pumping assembly technical manual.
3. If not repaired, repeat repair steps or continue on with troubleshooting as applicable.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PUMPING ASSEMBLY, 600 GPM
PART NUMBER 600 GPM FPTA
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

PUMPING ASSEMBLY (600 GPM), PART NUMBER 600 GPM FPTA

Refer to TM 10-4320-374-13&P for troubleshooting the 600 GPM Pumping Assembly.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FILTER-SEPARATOR ASSEMBLY, LIQUID FUEL, 350 GPM
PART NUMBER MEFS18V350M
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FILTER-SEPARATOR ASSEMBLY, LIQUID FUEL, 350 GPM, PART NUMBER MEFS18V350M

Refer to TM 10-4320-374-13&P for troubleshooting the 350 GPM Liquid Fuel Filter-Separator Assembly.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 2 IN. X 50 FT., (DRY-BREAK VALVE) PART NUMBER 78009-100, LEAKS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

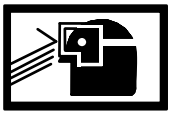
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 2 IN. X 50 FT., (DRY-BREAK VALVE), PART NUMBER 78009-100, LEAKS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING

FIRE

EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 2 IN. X 50 FT., (DRY-BREAK VALVE), PART NUMBER 78009-100, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaking.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 3 IN. X 50 FT., (DRY-BREAK VALVE)
PART NUMBER 78010-100, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0108
WP 0109
WP 0110

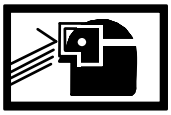
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 3 IN. X 50 FT., (DRY-BREAK VALVE), PART NUMBER 78010-100, LEAKS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING


FIRE


EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 3 IN. X 50 FT., (DRY-BREAK VALVE), PART NUMBER 78010-100, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform operational checkout (WP 0014).
4. Perform procedure to install components with cam-lock connectors (WP 0109).
5. Perform operational checkout (WP 0014).
6. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational check out (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaking.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, SUCTION, 4 IN. X 10 FT.
PART NUMBER M370B091A0100A, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, SUCTION, 4 IN. X 10 FT., PART NUMBER M370B091A0100A, LEAKS

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING

FIRE

EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, SUCTION, 4 IN. X 10 FT., PART NUMBER M370B091A0100A, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks at couplings.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings, remove any debris found.
3. Perform operational checkout (WP 0014).
4. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaks at couplings.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 4 IN. X 25 FT.
PART NUMBER 78007-102, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

TM 10-4930-248-13&P
WP 0014
WP 0108
WP 0109
WP 0110

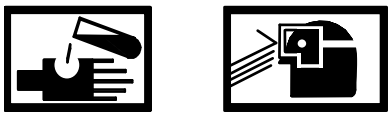
Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 4 IN. X 25 FT., PART NUMBER, 78007-102, LEAKS

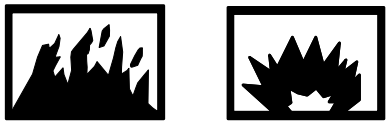
WARNING



CHEMICAL **EYE PROTECTION**

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING



FIRE **EXPLOSION**

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 4 IN. X 25 FT., PART NUMBER, 78007-102, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaking.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, SUCTION, 6 IN. X 10 FT.
PART NUMBER 301.109, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, SUCTION, 6 IN. X 10 FT., PART NUMBER 301.109, LEAKS

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING

FIRE

EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, SUCTION, 6 IN. X 10 FT., PART NUMBER 301.109, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks at couplings

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109). Check for debris inside couplings. Remove any debris found.
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaks at couplings.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 6 IN. X 10 FT.
PART NUMBER 78008-1001, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

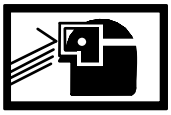
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 10 FT., PART NUMBER 78008-1001, LEAKS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING

FIRE

EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 10 FT., PART NUMBER 78008-1001, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks at couplings.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109). Check for debris inside couplings. Remove any debris found.
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaks at couplings.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 6 IN. X 25 FT.
PART NUMBER 78008-100, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

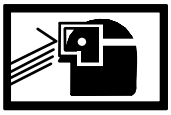
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 25 FT., PART NUMBER 78008-100, LEAKS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING

FIRE

EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 25 FT., PART NUMBER 78008-100, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaking.

CORRECTIVE ACTION

Refer to ruptured fuel system hoses repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HOSE ASSEMBLY, DISCHARGE, 6 IN. X 50 FT.
PART NUMBER 78008-101, LEAKS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 50 FT., PART NUMBER 78008-101, LEAKS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

WARNING


FIRE


EXPLOSION

Material may explode if subjected to high temperatures, sources of ignition or high pressure. Material may ignite and cause burns.

HOSE ASSEMBLY, DISCHARGE, 6 IN. X 50 FT., PART NUMBER 78008-101, LEAKS - CONTINUED

SYMPTOM

Hose assembly leaks

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Hose assembly still leaking.

CORRECTIVE ACTION

Refer to Ruptured Fuel System Hoses Repair (WP 0108).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
VALVE ASSEMBLY, BALL, 2 IN.
PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, BALL, 2 IN., PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Ball valve assembly leaks.

MALFUNCTION

Ball valve leaks at cam-lock connector dust plug.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If ball valve assembly still leaks at coupling, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the cam-lock connector dust plug and ball valve connection.

CORRECTIVE ACTION

1. Perform procedures to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedures to install components with cam-lock connectors (WP 0109).
4. Perform operational check out (WP 0014).
5. If ball valve assembly still leaks at couplings, proceed to next malfunction.

VALVE ASSEMBLY, BALL, 2 IN., PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Gasket is defective or missing from the cam-lock connector dust plug and coupling connection.

CORRECTIVE ACTION

1. Perform procedures to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If ball valve assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Ball valve assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve will not connect with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
VALVE ASSEMBLY, BUTTERFLY, 4 IN.
PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, BUTTERFLY, 4 IN., PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY

SYMPTOM

Valve assembly leaks at couplings.

MALFUNCTION

Cam-lock coupling is improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at coupling, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the valve assembly coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside coupling. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If valve assembly still leaks at coupling, proceed to next malfunction.

VALVE ASSEMBLY, BUTTERFLY, 4 IN., PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

MALFUNCTION

Gasket is defective or missing from valve assembly coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at coupling, proceed to next malfunction.

MALFUNCTION

Valve assembly is still leaking at coupling.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly handle hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
VALVE ASSEMBLY, GATE, 4 IN
PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, GATE, 4 IN., PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY

SYMPTOM

Valve assembly leaks at coupling.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the valve assembly coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If valve assembly still leaks at couplings, proceed to next malfunction.

VALVE ASSEMBLY, GATE, 4 IN., PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

MALFUNCTION

Gasket is defective or missing from valve assembly coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Valve assembly is still leaks at coupling.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly leaks.

MALFUNCTION

Joint gasket leaks.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

VALVE ASSEMBLY, GATE, 4 IN., PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

SYMPTOM

Valve assembly hand-wheel hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
VALVE ASSEMBLY, GATE, 6 IN.
PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, GATE, 6 IN., PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY

SYMPTOM

Valve assembly leaks at coupling.

MALFUNCTION

Cam-lock coupling is improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the valve assembly coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside coupling. Remove debris.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If valve assembly still leaks at couplings, proceed to next malfunction.

VALVE ASSEMBLY, GATE, 6 IN., PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

MALFUNCTION

Gasket is defective or missing from valve assembly coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If valve assembly still leaks at coupling, proceed to next malfunction.

MALFUNCTION

Valve assembly is still leaks at coupling.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly leaks.

MALFUNCTION

Joint gaskets leak.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

VALVE ASSEMBLY, GATE, 6 IN., PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

SYMPTOM

Valve assembly hand-wheel hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE), PART NUMBER 64020FQ LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

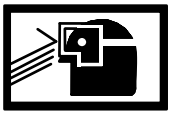
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE QUICK DISCONNECT X 2 IN., (DRY-BREAK VALVE), PART NUMBER 64020FQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Adapter dry-break valve couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with valve quick disconnect coupling half (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, MALE QUICK DISCONNECT X 2 IN., (DRY-BREAK VALVE), PART NUMBER 64020FQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the adapter dry-break valve coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with valve quick disconnect coupling half (WP 0109).
2. Check for debris inside dry-break valve couplings. Remove any debris found.
3. Perform procedure to install components with valve quick disconnect coupling half (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter dry-break still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from adapter assembly dry-break valve coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly is damaged or defective.

CORRECTIVE ACTION

Contact Field Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT 2 IN. X 2 IN. (DRY BREAK VALVE), PART NUMBER 64020GQ LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

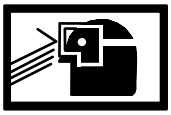
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT 2 IN. X 2 IN., (DRY BREAK VALVE), PART NUMBER 64020GQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Adapter dry-break valve couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with valve quick disconnect coupling half (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT 2 IN. X 2 IN., (DRY BREAK VALVE), PART NUMBER 64020GQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Adapter cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the adapter dry-break valve coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with valve quick disconnect coupling half (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with valve quick disconnect coupling half (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the adapter.

CORRECTIVE ACTION

1. Perform procedure to remove components with valve quick disconnect coupling half (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT 2 IN X 2 IN., (DRY BREAK VALVE), PART NUMBER 64020GQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Gasket is defective or missing from adapter assembly dry-break valve coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly is damaged or defective.

CORRECTIVE ACTION

Contact Field Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 3 IN. X FEMALE 3 IN., PART NUMBER 60273030SG
LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

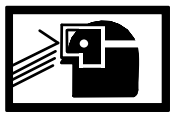
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE 3 IN. X FEMALE 3 IN., PART NUMBER 60273030SG, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, FEMALE 3 IN. X FEMALE 3 IN., PART NUMBER 60273030SG, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

MALFUNCTION

Debris is trapped inside the adapter coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, MALE 3 IN X MALE 3 IN., PART NUMBER 602830301
LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE 3 IN. X MALE 3 IN., PART NUMBER 602830301, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform the procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, MALE 3 IN. X MALE 3 IN., PART NUMBER 602830301, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the adapter coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from quick disconnect coupling.

CORRECTIVE ACTION

1. Perform the procedure to replace gasket in cam-lock connectors (WP 0110).
2. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X FEMALE 4 IN.
PART NUMBER 602740401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

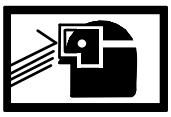
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE 4 IN. X FEMALE 4 IN., PART NUMBER 602740401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform the procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, FEMALE 4 IN. X FEMALE 4 IN., PART NUMBER 602740401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the adapter coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, MALE 4 IN. X MALE 4 IN.
PART NUMBER 602840401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110

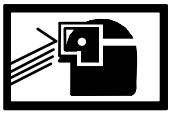
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE 4 IN. X MALE 4 IN., PART NUMBER 602840401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, MALE 4 IN. X MALE 4 IN., PART NUMBER 602840401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the adapter coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X MALE 6 IN.
PART NUMBER 435BA-4060-AC, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

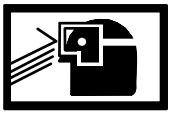
References
WP 0014
WP 0109
WP 0110

Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE 4 IN. X MALE 6 IN., PART NUMBER 435BA-4060-AC, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL **EYE PROTECTION**

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

ADAPTER ASSEMBLY, FEMALE 4 IN. X MALE 6 IN., PART NUMBER 435BA-4060-AC, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the adapter coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Adapter assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X UNISEX 3 IN
PART NUMBER 64031MQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

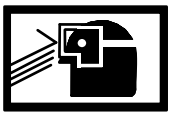
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE 4 IN. X. UNISEX 3 IN, PART NUMBER 64031MQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks.

MALFUNCTION

Adapter assembly leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter is assembly damaged or defective.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX 3 IN.
PART NUMBER 64031PQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

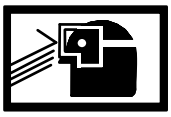
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX 3 IN., PART NUMBER 64031PQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks.

MALFUNCTION

Adapter assembly leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly is damaged or defective.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 2 IN. X MALE 1.5 IN.
PART NUMBER 602620151, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110
WP 0116

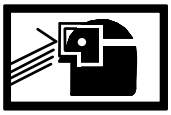
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REDUCER ASSEMBLY, FEMALE 2 IN. X MALE 1.5 IN., PART NUMBER 602620151, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Reducer assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

REDUCER ASSEMBLY, FEMALE 2 IN. X MALE 1.5 IN., PART NUMBER 602620151, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the reducer coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors in (WP 0110).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Reducer assembly still leaks fuel.

CORRECTIVE ACTION

Refer to disassemble 2 in. female x 1.5 in. male reducer assembly (WP 0116).

SYMPTOM

Reducer will not connect with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Refer to disassemble 2 in. female x 1.5 in. male reducer assembly (WP 0116).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 2 IN.
PART NUMBER 602640201, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110
WP 0117

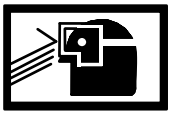
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 2 IN., PART NUMBER 602640201, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Reducer assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 2 IN., PART NUMBER 602640201, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the reducer coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Reducer assembly still leaks fuel.

CORRECTIVE ACTION

Refer to disassemble 4 in. female x 2 in. male reducer assembly camlock connector (WP 0117).

SYMPTOM

Reducer will not connect with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Refer to disassemble 4 in. female x 2 in. male reducer assembly camlock connector (WP 0117).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 3 IN.
PART NUMBER 602640301, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110
WP 0118

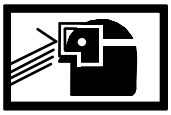
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REDUCER ASSEMBLY, 4 IN. FEMALE X 3 IN. MALE, PART NUMBER 602640301, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Reducer assembly leaks fuel.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

REDUCER ASSEMBLY, 4 IN. FEMALE X 3 IN. MALE, PART NUMBER 602640301, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the reducer coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Reducer assembly still leaks fuel.

CORRECTIVE ACTION

Refer to disassemble 4 in. female x 3 in. male reducer assembly (WP 0118).

SYMPTOM

Reducer assembly will not connect with other components.

MALFUNCTION

Cam-lock coupling half is defective or damaged.

CORRECTIVE ACTION

Refer to disassemble 4 in. female x 3 in. male reducer assembly (WP 0118).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, MALE 4 IN. X FEMALE 3 IN. PART NUMBER 602630401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0109
WP 0110
WP 0119

Personnel Required

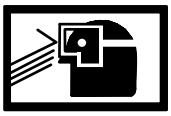
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REDUCER ASSEMBLY, MALE 4 IN. X FEMALE 3 IN., PART NUMBER 602630401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Reducer assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

REDUCER ASSEMBLY, MALE 4 IN. X FEMALE 3 IN., PART NUMBER 602630401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the reducer coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from quick disconnect coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Reducer assembly still leaks fuel.

CORRECTIVE ACTION

Refer to disassemble 4 in. male x 3 in. female reducer assembly camlock connector (WP 0119).

SYMPTOM

Reducer will not connect with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Refer to disassemble 4 in. male x 3 in. female reducer assembly camlock connector (WP 0119).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 6 IN. X MALE 4 IN.
PART NUMBER 602660401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110
WP 0120

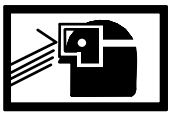
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REDUCER ASSEMBLY, FEMALE 6 IN. X MALE 4 IN., PART NUMBER 602660401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Reducer assembly leaks fuel.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

REDUCER ASSEMBLY, FEMALE 6 IN. X MALE 4 IN., PART NUMBER 602660401, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the reducer coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If reducer assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Reducer assembly still leaks fuel.

CORRECTIVE ACTION

Refer to disassemble 6 in. female x 4 in. male reducer assembly (WP 0120).

SYMPTOM

Reducer will not connect with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Refer to disassemble 6 in. female x 4 in. male reducer assembly (WP 0120).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, (DRY-BREAK VALVE) 2 IN.
PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, (VALVE, DRY-BREAK) 2 IN., PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with valve dry-break (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at valve dry-break, proceed to next malfunction.

TEE ASSEMBLY, (VALVE, DRY-BREAK) 2 IN., PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with valve dry-break (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with valve dry-break (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at valve dry-break, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from hose coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN. PART NUMBER 78021-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN., PART NUMBER 78021-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN., PART NUMBER 78021-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Gasket is defective or missing from hose coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 4 IN. PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 4 IN., PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly couplings leak fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform operational checkout (WP 0014).
4. Perform procedure to install components with cam-lock connectors (WP 0109).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 4 IN., PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Gasket is defective or missing from hose coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly couplings still leak fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Joint gasket leaks.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly is damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4 IN.
PART NUMBER 78026-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4 IN., PART NUMBER 78026-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks.

MALFUNCTION

Tee assembly cam-lock connector gasket is missing, defective or damaged.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Cam-lock connectors are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks, proceed to next malfunction.

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4 IN., PART NUMBER 78026-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the tee assembly cam-lock connectors.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaking.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN. PART NUMBER 300.2432, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN., PART NUMBER 300.2432, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN., PART NUMBER 300.2432, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Gasket is defective or missing from hose coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN. PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN., PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN., PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Gasket is defective or missing from coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE
PART NUMBER 300.2431, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Quartermaster and Chemical Repairman 63J

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE, PART NUMBER, 300.2431 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE, PART NUMBER, 300.2431 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Gasket is defective or missing from coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN. PART NUMBER 78027-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN., PART NUMBER 78027-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Hose couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with cam-lock connectors in (WP 0109).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If tee assembly still leaks at couplings, proceed to next malfunction.

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN., PART NUMBER 78027-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Gasket is defective or missing from coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If tee assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Tee assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN., W/PRESSURE REGULATOR PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110

Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN., W/PRESSURE REGULATOR, PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Nozzle assembly leaks fuel.

MALFUNCTION

Quick disconnect couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedures to remove and install components with non-valve quick disconnect couplings (WP 0109).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the hose coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with non-valve quick disconnect couplings (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with non-valve quick disconnect couplings (WP 0109).
4. Perform operational checkout (WP 0014).
5. If nozzle assembly still leaks at couplings, proceed to next malfunction.

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN., W/PRESSURE REGULATOR, PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Gasket is defective or missing from quick disconnect coupling.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in non-valve quick disconnect couplings (WP 0110).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Nozzle assembly still leaks fuel.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Nozzle assembly will not connect with other components.

MALFUNCTION

Quick disconnect coupling half defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN., W/PRESSURE REGULATOR, PART NUMBER 64210, EXCESSIVE FUEL DISCHARGE PRESSURE TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN., W/PRESSURE REGULATOR, PART NUMBER 64210, HAS EXCESSIVE FUEL DISCHARGE PRESSURE

SYMPTOM

Nozzle has excessive discharge pressure.

MALFUNCTION

Hose End Control Valve (HECV) not operating properly.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1.5 IN.
PART NUMBER 64199, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1.5 IN., PART NUMBER 64199, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Nozzle assembly will not join with other components.

MALFUNCTION

Quick disconnect coupling half defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Nozzle assembly leaks.

MALFUNCTION

Nozzle valve leaking at quick disconnect coupling.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING
PART NUMBER 64017B, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING, PART NUMBER 64017B, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Closed circuit refueling nozzle assembly leaks at closed circuit refueling receptacle when refueling.

MALFUNCTION

Nozzle or nozzle receptacle is defective.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Cam-lock connector leaks.

MALFUNCTION

Cam-lock connector is improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING, PART NUMBR 64017B, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

MALFUNCTION

Debris is trapped inside the cam-lock connector

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside coupling half. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If nozzle assembly still leaks at coupling half, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors in (WP 0110).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Cam-lock connector still leaks

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Closed circuit refueling nozzle assembly will not join with other components.

MALFUNCTION

Cam-lock connector is defective or damaged.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, D-1, UNISEX COUPLING, 2 IN.
PART NUMBER 64201CF4GHX, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

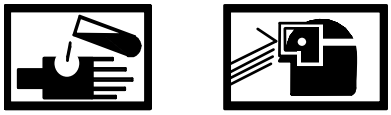
Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, UNISEX COUPLING 2 IN., PART NUMBER 64201CF4GHX, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING



CHEMICAL **EYE PROTECTION**

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

D1 nozzle assembly leaks at refueling receptacle when refueling.

MALFUNCTION

D1 nozzle assembly is defective.

CORRECTIVE ACTION

Contact Field Maintenance.

SYMPTOM

Unisex connect assembly leaks or will not connect.

MALFUNCTION

Unisex connector does not fasten.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, D-1, FEMALE, CAM-LOCK COUPLING, 4 IN.
PART NUMBER 64201CGH2MQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

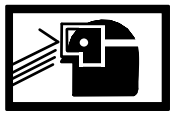
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, FEMALE, CAM-LOCK COUPLING, 4 IN. PART NUMBER 64201CGH2MQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

D1 nozzle assembly leaks at refueling receptacle when refueling.

MALFUNCTION

D1 nozzle assembly is defective.

CORRECTIVE ACTION

Contact Field Maintenance.

NOZZLE ASSEMBLY, D-1, FEMALE, CAM-LOCK COUPLING, 4 IN. PART NUMBER 64201CGH2MQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

Cam-lock coupling leaks.

MALFUNCTION

Component parts are defective.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock coupling half (WP 0109).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Debris is trapped inside the cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside coupling half. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If nozzle assembly still leaks at coupling half, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Cam-lock connector still leaks.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NOZZLE ASSEMBLY, D-1, MALE, CAM-LOCK COUPLING, 4 IN.
PART NUMBER 64201CGH2KQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References
WP 0014
WP 0109
WP 0110

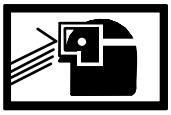
Personnel Required
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, MALE, CAM-LOCK COUPLING, 4 IN., PART NUMBER 64201CGH2KQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

D1 nozzle assembly leaks at refueling receptacle when refueling.

MALFUNCTION

D1 nozzle assembly is defective.

CORRECTIVE ACTION

Contact Field Maintenance.

NOZZLE ASSEMBLY, D-1, MALE, CAM-LOCK COUPLING, 4 IN., PART NUMBER 64201CGH2KQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

SYMPTOM

Cam-lock coupling leaks.

MALFUNCTION

Component parts are defective.

MALFUNCTION

Debris is trapped inside the cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside coupling half. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If nozzle assembly still leaks at coupling half, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If nozzle assembly still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Cam-lock connector still leaks

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET 2 IN. PART NUMBER 64249, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

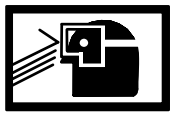
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET 2 IN, PART NUMBER 64249, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Pressure Regulator leaks.

MALFUNCTION

Cam-lock couplings are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014).
3. If pressure regulator still leaks at couplings, proceed to next malfunction.

REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET 2 IN, PART NUMBER 64249, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

MALFUNCTION

Debris is trapped inside the pressure regulator coupling connection.

CORRECTIVE ACTION

1. Perform procedure to remove components with cam-lock connectors (WP 0109).
2. Check for debris inside couplings. Remove any debris found.
3. Perform procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout (WP 0014).
5. If pressure regulator still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Gasket is defective or missing from pressure regulator coupling with cam-lock connector.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If pressure regulator still leaks at couplings, proceed to next malfunction.

MALFUNCTION

Pressure regulator still leaking.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools	References
Gloves, rubber, industrial (WP 0165, Item 18)	WP 0014
Goggles, industrial (WP 0165, Item 17)	WP 0109
Fuel spill control kit (WP 0163, Item 24)	WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

Strainer Assembly, In-Line 4 In. assembly leaks coupling.

MALFUNCTION

Camlock coupling are improperly fastened.

CORRECTIVE ACTION

1. Perform procedure to remove and install components with cam-lock connectors (WP 0109).
2. Perform operational checkout (WP 0014) by moving the strainer to one of the bulk delivery points with D-1.

SYMPTOM

Strainer Assembly, In-Line 4 in. continues to leak.

MALFUNCTION

Gasket is defective or missing from Strainer Assembly.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014) by moving the strainer to one of the bulk delivery points with D-1.
3. If Strainer Assembly, In-Line 4 in. still leaks at couplings, proceed to next malfunction.

STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

MALFUNCTION

Strainer Assembly, In-Line 4 in. continues to leak.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FLOW METER ASSEMBLY, IN-LINE 6 IN.
PART NUMBER LD02021-006, DOES NOT INDICATE AMOUNT OF FUEL PUMPED
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, IN-LINE 6 IN., PART NUMBER, LD02021-006 DOES NOT INDICATE AMOUNT OF FUEL PUMPED

SYMPTOM

Flow meter assembly does not indicate amount of fuel pumped.

MALFUNCTION

Register readout faulty.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FLOW METER ASSEMBLY, IN-LINE 6I N., PART NUMBER LD02021-006 DOES NOT INDICATE CORRECT AMOUNT OF FUEL PUMPED TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, 6 IN. IN-LINE, PART NUMBER LD02021-006, DOES NOT INDICATE CORRECT AMOUNT OF FUEL PUMPED

SYMPTOM

Flow meter assembly does not indicate the correct amount of fuel pumped.

MALFUNCTION

Register readout is not functioning properly.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FLOW METER ASSEMBLY, IN-LINE 6 IN.
PART NUMBER LD02021-006, DOES NOT INDICATE FUEL FLOW
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, IN-LINE 6 IN., PART NUMBER LD02021-006, DOES NOT INDICATE FUEL FLOW

SYMPTOM

Flow Meter assembly does not indicate fuel flow.

MALFUNCTION

Flow Meter assembly clogged with debris at inlet hose connection.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FLOW METER ASSEMBLY, IN-LINE 6 IN.
PART NUMBER LD02021-006, LEAKS DURING OPERATION
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, IN-LINE 6 IN., PART NUMBER LD02021-006, LEAKS DURING OPERATION

SYMPTOM

Flow meter assembly leaks.

MALFUNCTION

Flow meter leaks between readout device and front cover.

CORRECTIVE ACTION

Contact Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FUEL ADDITIVE INJECTOR ASSEMBLY IN-LINE 4 IN.
PART NUMBER TPI-4T-4A-1
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

TM 10-4930-364-13&P

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FUEL ADDITIVE INJECTOR ASSEMBLY, IN-LINE 4 IN., PART NUMBER, TPI-4T-4A-1

Refer to TM 10-4930-364-13&P for troubleshooting the Fuel Additive Injector Assembly.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FUEL TANK, COLLAPSIBLE, BETA, 210K GAL.
PART NUMBER GTA-210K
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

References
TM 10-5430-239-12&P

TROUBLESHOOTING PROCEDURES

FUEL TANK, COLLAPSIBLE, BETA, 210K GAL., PART NUMBER GTA-210K

Refer to TM 10-5430-239-12&P for troubleshooting the BFTA 210,000 gallon collapsible fuel tank.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
WET WING DEFUELING KIT, PART NUMBER 78029-100
COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Fuel spill control kit (WP 0163, Item 24)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

WET WING DEFUELING KIT, PART NUMBER 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS

SYMPTOM

3 in. hose assembly leaks.

MALFUNCTION

Hose leaks.

CORRECTIVE ACTION

1. Repair 3 in. X 50 ft dry-break valve hose assembly (WP 0108).
2. Perform operational checkout (WP 0014).

MALFUNCTION

Hose valve coupling leaks.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout (WP 0014).
3. If hose dry-break valve coupling still leaks, contact Field Maintenance.

WET WING DEFUELING KIT, PART NUMBER, 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

4 in. male cam-lock X 3 in. quick disconnect coupling half adapter leaks.

MALFUNCTION

Adapter valve quick disconnect coupling half or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in valve quick disconnect coupling half in (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter valve quick disconnect coupling half still leaks, contact Field Maintenance.

MALFUNCTION

Adapter cam-lock connector or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter cam-lock connector still leaks, contact Field Maintenance.

SYMPTOM

4 in. female cam-lock X 3 in. quick disconnect coupling half adapter leaks.

MALFUNCTION

Adapter valve quick disconnect coupling half or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform procedure to replace gaskets in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter valve quick disconnect coupling half still leaks, contact Field Maintenance.

WET WING DEFUELINGKIT, PART NUMBER, BX2ACTP01D0000 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

MALFUNCTION

Adapter cam-lock connector or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout (WP 0014).
3. If adapter cam-lock connector still leaks, contact Field Maintenance.

SYMPTOM

3 in. hose assembly will not connect with other components.

MALFUNCTION

Hose quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout (WP 0014).

SYMPTOM

4 in. male cam-lock X 3 in. quick disconnect coupling half adapter will not connect with other components.

MALFUNCTION

Adapter valve quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout (WP 0014).

WET WING DEFUELING KIT, PART NUMBER, BX2ACTP01D0000 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

MALFUNCTION

Adapter cam-lock connectors damaged.

CORRECTIVE ACTION

1. Perform procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout (WP 0014).

SYMPTOM

4 in. female cam-lock X 3 in. quick disconnect coupling half adapter will not connect with other components.

MALFUNCTION

Adapter valve quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout (WP 0014).

MALFUNCTION

Adapter cam-lock connectors damaged.

CORRECTIVE ACTION

1. Perform procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout (WP 0014).

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CONTAINER CARGO, TRICON, PART NUMBER BXTBCTTATPD0003
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Petroleum Supply Specialist 92F

References
TM 55-8145-203-13&P

TROUBLESHOOTING PROCEDURES

CONTAINER CARGO, TRICON, PART NUMBER BXTBCTTATPD0003

Refer to TM 55-8145-203-13&P for troubleshooting the Tricon Cargo Container, Part Number BXTBCTTATPD0003.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CONTAINER CARGO, ISO 20-FT, PART NUMBER BX2ACTP01D0000
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required	References
Petroleum Supply Specialist 92F	TM 55-8115-204-13&P

TROUBLESHOOTING PROCEDURES

CONTAINER CARGO, ISO 20-FT, PART NUMBER BX2ACTP01D0000

Refer to TM 55-8115-204-13&P for troubleshooting the ISO 20-FT Cargo Container, Part Number BX2ACTP01D0000.

END OF WORK PACKAGE

CHAPTER 4

FIELD MAINTENANCE TROUBLESHOOTING PROCEDURES FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

FIELD MAINTENANCE
FSSP MASTER MALFUNCTION/SYMPTOM INDEX

MALFUNCTION/SYMPTOM	TROUBLESHOOTING PROCEDURE
PUMPING ASSEMBLY	
Pumping Assembly, 600 GPM, Part Number 600 GPM FPTA	WP 0070
FILTER SEPERATOR ASSEMBLY	
Filter-Separator Assembly, Liquid Fuel, 350 GPM, Part Number MEFS18V350M	WP 0071
COMPONENTS	
Valve Assembly, Ball, 2 In., Part Number 78048-100, Leaks or Will Not Join With Other Components	WP 0072
Valve Assembly, Butterfly, 4 In., Part Number 78042-100, Leaks or Does Not Operate Properly	WP 0073
Valve Assembly, Gate, 4 In., Part Number 13228E3435, Leaks or Does Not Operate Properly	WP 0074
Valve Assembly, Gate, 6 In., Part Number 13228E3425, Leaks or Does Not Operate Properly	WP 0075
Adapter Assembly, Male Quick Disconnect 2 In. x (Dry-Break Valve) 2 IN., Part Number 64020GQ, Leaks or Will Not Connect With Other Components	WP 0076
Adapter Assembly, Male Quick Disconnect, 2 In. x. (Dry-Break Valve) 2 IN., Part Number 64020FQ, Leaks or Will Not Connect With Other Components	WP 0077
Adapter Assembly, Female 4 In. x Unisex 3 In, Part Number 64031MQ, Leaks or Will Not Connect With Other Components	WP 0078
Adapter Assembly, Male 4 In. x Unisex 3 In, Part Number 64031PQ, Leaks or Will Not Connect With Other Components	WP 0079
Tee Assembly, (Dry-Break Valve) 2 In, Part Number 64022D, Leaks or Will Not Join With Other Components	WP 0080
Tee Assembly, Female 4 In. x Male 4 In. x 4 In. Female, Part Number 78021-100, Leaks or Will Not Join With Other Components	WP 0081
Tee Assembly, Female 6 In. x Male 6 In. x Male 4 In., Part Number 300.2434, Leaks or Will Not Join With Other Components	WP 0082
Tee Assembly, Male 6 In. x Female 6 In. x Male 4 In., Part Number 78026-100, Leaks or Will Not Join With Other Components	WP 0083
Tee Assembly, Male 6 In x Female 6 In. x Female 4 In., Part Number 300.2432, Leaks or Will Not Join With Other Components	WP 0084
Tee Assembly, Female 6 In. x Female 6 In. x Male 6 In, Part Number 300.2433, Leaks or Will Not Join With Other Components	WP 0085
Tee Assembly, Female 6 In. x Male 6 In. x Female 6 In., Part Number 300.2431, Leaks or Will Not Join With Other Components	WP 0086
Tee Assembly, Female 6 In. x Male 6 In. x Male 6 In., Part Number 78027-100, Leaks or Will Not Join With Other Components	WP 0087

MALFUNCTION / SYMPTOM	TROUBLESHOOTING PROCEDURE
Nozzle Assembly, Fuel and Oil Service, 1 In., W/ Pressure Regulator, Part Number 64210, Leaks or Will Not Join With Other Components	WP 0088
Nozzle Assembly, Fuel and Oil Service, 1 In., W/ Pressure Regulator, Part Number 64210, Has Excessive Fuel Discharge Pressure	WP 0089
Nozzle Assembly, Fuel and Oil Service, 1.5 In., Part Number 64199, Leaks or Will Not Join With Other Components	WP 0090
Nozzle Assembly, Closed Circuit Refueling, Part Number 300.155, Leaks or Will Not Join With Other Components	WP 0091
Nozzle Assembly, D-1, Unisex Coupling, 2 In., Part Number 64201CF4GHX, Leaks or Will Not Join With Other Components	WP 0092
Nozzle Assembly, D-1, Female, Cam-Lock Coupling, 4 In., Part Number 64201CGH2MQ, Leaks or Will Not Join With other Components	WP 0093
Nozzle Assembly, D-1, Male, Cam-Lock Coupling, 4 In., Part Number 64201CGH2KQ, Leaks or Will Not Join With Other Components	WP0094
Regulator, Pressure, 2 IN Female Inlet, 2 In Unisex Outlet, Part Number 64249, Leaks or Will Not Join With Other Components	WP 0095
Strainer Assembly, In-Line 4 In., Part Number 735SBA4000ASAJ, Leaks or Will Not Join With Other Components	WP 0096
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Amount of Fuel Pumped	WP 0097
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Correct Amount of Fuel Pumped	WP 0098
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Does Not Indicate Fuel Flow	WP 0099
Flow Meter Assembly, In-Line 6 In., Part Number LD02021-006, Leaks During Operation	WP 0100
Fuel Additive Injector Assembly, Part Number TPI-4T-4A-1	WP 0101
Fuel Tank, Collapsible, BETA, 210K Gal, Part Number GTA-210K	WP 0102
Wet Wing Defueling Kit, Part Number 78029-100, Leaks or Will Not Join With Other Components	WP 0103
Container Cargo, Tricon, Part Number BXTBCTTATPD0003	WP 0104
Container Cargo, ISO 20-Ft, Part Number BX2ACTP01D0000	WP 0105

END OF WORK PACKAGE

FIELD MAINTENANCE
PUMPING ASSEMBLY, 600 GPM
PART NUMBER 78023-100
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

PUMPING ASSEMBLY, 600 GPM, PART NUMBER 78023-100

Refer to applicable technical manual for troubleshooting the 600 GPM pumping assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
FILTER-SEPARATOR ASSEMBLY, LIQUID FUEL, 350 GPM
PART NUMBER MEFS18V350M
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FILTER-SEPARATOR ASSEMBLY, LIQUID FUEL, 350 GPM, PART NUMBER MEFS18V350M

Refer to TM 10-4330-235-13&P for troubleshooting the 350 GPM liquid fuel filter-separator assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, BALL, 2IN.
PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0131

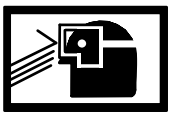
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, BALL, 2 IN., PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Valve assembly leaks.

MALFUNCTION

Valve assembly ball leaks.

CORRECTIVE ACTION

1. Repair valve assembly ball (WP 0131).
2. Perform operational checkout of the FSSP (WP 0014).

VALVE ASSEMBLY, BALL, 2 IN., PART NUMBER 78048-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

SYMPTOM

Quick disconnect coupling half will not connect with other components.

MALFUNCTION

Quick disconnect coupling half defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly ball (WP 0131).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, BUTTERFLY, 4 IN.
PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0132

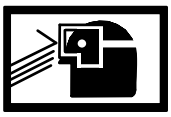
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, BUTTERFLY, 4 IN., PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Valve assembly leaks at couplings.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0132).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

VALVE ASSEMBLY, BUTTERFLY, 4 IN., PART NUMBER 78042-100, LEAKS OR DOES NOT OPERATE PROPERLY-CONTINUED

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0132).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Valve assembly handle hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0132).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Valve assembly does not operate properly.

MALFUNCTION

Valve handle is hard to operate.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0132).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, GATE, 4 IN, PART NUMBER 13228E3435, LEAKS OR DOES NOT OPEATE PROPERLY TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

WP 0014
WP 0133

Personnel Required

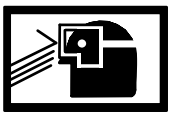
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, GATE, 4 IN., PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Valve assembly is leaking at couplings.

MALFUNCTION

Valve assembly leaks at couplings.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0133).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

VALVE ASSEMBLY, GATE, 4 IN., PART NUMBER 13228E3435, LEAKS OR DOES NOT OPERATE PROPERLY-CONTINUED

SYMPTOM

Valve assembly leaks.

MALFUNCTION

Joint gaskets leaking.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0133).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0133).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Gate valve assembly hand wheel hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0133).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, GATE, 6 IN.
PART NUMBER 13228E3425 LEAKS OR DOES NOT OPERATE PROPERLY
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0134

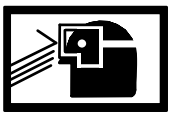
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

VALVE ASSEMBLY, GATE, 6 IN., PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Valve assembly is leaking at couplings.

MALFUNCTION

Valve assembly leaks at couplings.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0134).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

VALVE ASSEMBLY, GATE, 6 IN., PART NUMBER 13228E3425, LEAKS OR DOES NOT OPERATE PROPERLY - CONTINUED

SYMPTOM

Valve assembly leaks.

MALFUNCTION

Joint gaskets leaking.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0134).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Valve assembly will not join with other components.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0134).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Gate valve assembly hand wheel hard to operate or will not operate.

MALFUNCTION

Component parts are defective or damaged.

CORRECTIVE ACTION

1. Repair valve assembly (WP 0134).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT, 2 IN., X (DRY-BREAK VALVE) 2 IN. PART NUMBER 64020GQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0135

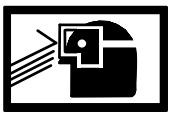
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT, 2 IN., X (DRY-BREAL VALVE) 2 IN., PART NUMBER 64020GQ , LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Male adapter assembly leaks.

MALFUNCTION

Adapter assembly leaks fuel.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0135).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT, 2 IN., X (DRY-BREAL VALVE) 2 IN., PART NUMBER 64020GQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly damaged or defective.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0135).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0135).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, MALE QUICK DISCONNECT 2 IN. X (DRY-BREAK VALVE) 2 IN. PART NUMBER 64020FQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0136

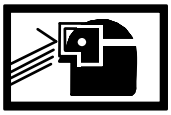
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE QUICK DISCONNECT 2 IN. X (DRY-BREAK VALVE) 2 IN., PART NUMBER 64020FQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Adapter assembly leaks fuel.

MALFUNCTION

Adapter assembly couplings leaks fuel.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0136).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

ADAPTER ASSEMBLY, MALE QUICK DISCONNECT 2 IN. X (DRY-BREAK VALVE) 2 IN., PART NUMBER 64020FQ , LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS - CONTINUED

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly damaged or defective.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0136).
2. Perform operational checkout of the FSSP (WP 0014) after installation.
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

1. Repair adapter assembly. (WP 0136).
2. Perform operational checkout of the FSSP (WP 0014) after installation.
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X UNISEX DRY-BREAK 3 IN. PART NUMBER 64031MQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0137

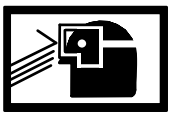
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, FEMALE 4 IN. X UNISEX DRY-BREAK 3 IN., PART NUMBER 64031MQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Male adapter assembly leaks.

MALFUNCTION

Adapter assembly leaks fuel.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0137).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

ADAPTER ASSEMBLY, FEMALE 4 IN. X UNISEX DRY-BREAK 3 IN., PART NUMBER 64031MQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly damaged or defective.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0137).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0137).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX DRY-BREAK 3 IN. PART NUMBER 64031PQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0138

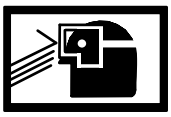
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX DRY-BREAK 3 IN., PART NUMBER 64031PQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Male adapter assembly leaks.

MALFUNCTION

Adapter assembly leaks fuel.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0138).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX DRY-BREAK 3 IN., PART NUMBER 64031PQ, LEAKS OR WILL NOT CONNECT WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

Adapter assembly will not connect with other components.

MALFUNCTION

Adapter assembly damaged or defective.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0138).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter assembly quick disconnect coupling half is defective or damaged.

CORRECTIVE ACTION

1. Repair adapter assembly (WP 0138).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, (DRY-BREAK VALVE), 2 IN.
PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0139

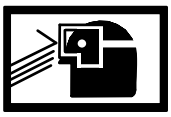
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, (DRY-BREAK VALVE), 2 IN., PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly leaks.

MALFUNCTION

Tee assembly leaks fuel.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0139).
2. Perform operation checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

TEE ASSEMBLY, (DRY-BREAK VALVE), 2 IN., PART NUMBER 64022D, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS - CONTINUED

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0139).
2. Perform operation checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN.
PART NUMBER 78021-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0140

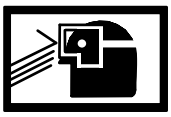
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN., PART NUMBER, 78021-100 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0140).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 4 IN.
PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0141

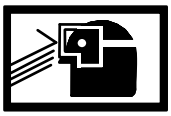
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 4 IN., PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0141).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 4 IN., PART NUMBER 300.2434, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Joint gasket leaks.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0141).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4 IN.
PART NUMBER 78026-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0170 Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0142

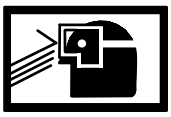
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4 IN., PART NUMBER, 78026-100 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0142)
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN.
PART NUMBER 300.2432, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0143

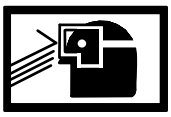
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN., PART NUMBER, 300.2432 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0143).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN.
PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0144

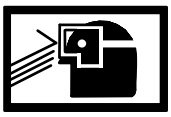
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN., PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0144).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN., PART NUMBER 300.2433, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

SYMPTOM

Tee assembly leaks fuel.

MALFUNCTION

Joint gasket leaks.

CORRECTIVE ACTION

1. Repair tee assembly (WP0144).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X FEMALE 6 IN.
PART NUMBER 300.2431, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0145

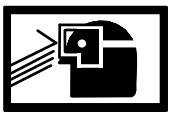
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X FEMALE 6 IN., PART NUMBER 300.2431, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0145).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN.
PART NUMBER 78027-100, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0146

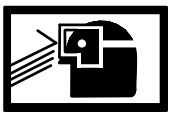
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN., PART NUMBER, 78027-100 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Tee assembly will not connect with other components.

MALFUNCTION

Tee assembly damaged.

CORRECTIVE ACTION

1. Repair tee assembly (WP 0146).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0147

Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR, PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Nozzle assembly leaks fuel.

MALFUNCTION

Nozzle assembly leaks at couplings.

CORRECTIVE ACTION

1. Repair nozzle assembly (WP 0147).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR, PART NUMBER 64210, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

SYMPTOM

Nozzle assembly will not connect with other components.

MALFUNCTION

Quick disconnect coupling half defective or damaged.

CORRECTIVE ACTION

1. Repair nozzle assembly (WP 0147).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

Hose end control valve has external leakage or damage.

MALFUNCTION

Hose end control valve leaks or is damaged.

CORRECTIVE ACTION

Contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR PART NUMBER 64210, EXCESSIVE FUEL DISCHARGE PRESSURE TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0147

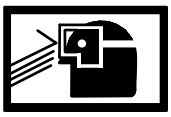
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR, PART NUMBER 64210, HAS EXCESSIVE FUEL DISCHARGE PRESSURE

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

1 in. fuel and oil service nozzle has excessive discharge pressure.

MALFUNCTION

Pressure regulator not operating properly.

CORRECTIVE ACTION

1. Repair 1 in. fuel and oil service nozzle assembly (WP 0147).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1.5 IN.
PART NUMBER 64199, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

WP 0014
WP 0148

Personnel Required

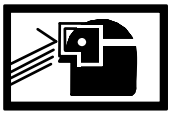
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, FUEL AMD OIL SERVICE, 1.5 IN., PART NUMBER 64199, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Nozzle assembly will not connect with other components.

MALFUNCTION

Nozzle assembly component is defective or damaged.

CORRECTIVE ACTION

1. Repair nozzle assembly (WP 0148).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

NOZZLE ASSEMBLY, FUEL AMD OIL SERVICE, 1.5 IN., PART NUMBER 64199, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUED

SYMPTOM

Nozzle assembly leaks

MALFUNCTION

Nozzle assembly leaks at coupling.

CORRECTIVE ACTION

1. Repair nozzle assembly (WP 0148).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING
PART NUMBER 64017B, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING, PART NUMBER 64017B LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

Refer to TM 10-4930-248-13&P for troubleshooting the CCR Nozzle Assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1, UNISEX COUPLING 2 IN.
PART NUMBER 64201CF4GHX, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, UNISEX COUPLING 2 IN., PART NUMBER 64201CF4GHX, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS.

Refer to WP 0056 for troubleshooting the D-1 Nozzle Assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1, FEMALE, CAM-LOCK COUPLING 4 IN.
PART NUMBER 64201CGH2MQ , LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, FEMALE, CAM-LOCK COUPLING, 4 IN., PART NUMBER 64201CGH2MQ LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

Refer to WP 0057 for troubleshooting the D-1 Nozzle Assembly Service.

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1, MALE, CAM-LOCK COUPLING, 4 IN.
PART NUMBER 64201CGH2KQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

NOZZLE ASSEMBLY, D-1, MALE, CAM-LOCK COUPLING, 4 IN., PART NUMBER 64201CGH2KQ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

Refer to WP 0058 for troubleshooting the D-1 Nozzle Assembly Service.

END OF WORK PACKAGE

FIELD MAINTENANCE
REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET, 2 IN.
PART NUMBER 64249, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0152

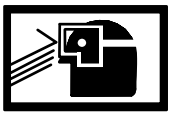
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET, 2 IN., PART NUMBER 64249 LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Pressure Regulator leaks at coupling.

MALFUNCTION

Hose assembly couplings or hose is damaged.

CORRECTIVE ACTION

1. Repair Pressure regulator (WP 0152).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0153

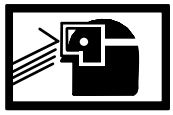
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Strainer Assembly, In-Line 4 in. assembly leaks.

MALFUNCTION

Strainer assembly, In-Line leaks at Joint gasket.

CORRECTIVE ACTION

1. Repair Strainer Assembly, In-Line 4 In. (WP 0153).
2. Perform operational checkout (WP 0014).

STRAINER ASSEMBLY, IN-LINE 4 IN., PART NUMBER 735SBA4000ASAJ, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS-CONTINUE

SYMPTOM

Strainer Assembly, In-Line 4 in. continues to leak.

MALFUNCTION

Strainer assembly is damaged.

CORRECTIVE ACTION

Replace component with serviceable like item.

END OF WORK PACKAGE

FIELD MAINTENANCE
FLOW METER ASSEMBLY, 6 IN. IN-LINE
PART NUMBER LD02021-006, DOES NOT INDICATE AMOUNT OF FUEL PUMPED
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

WP 0014
WP 0154

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, 6 IN. INLINE PART NUMBER, LD02021-006 DOES NOT INDICATE AMOUNT OF FUEL PUMPED

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Flow meter assembly does not indicate amount of fuel pumped.

MALFUNCTION

Register readout faulty.

CORRECTIVE ACTION

1. Replace register readout (WP 0154).
2. Perform operational checkout of the FSSP (WP 0014).
3. If flow meter assembly still does not indicate amount of fuel pumped after replacing register readout, proceed to next malfunction.

FLOW METER ASSEMBLY, 6 IN. INLINE PART NUMBER, LD02021-006 DOES NOT INDICATE AMOUNT OF FUEL PUMPED-CONTINUED

MALFUNCTION

Flow meter assembly still does not indicate amount of fuel pumped.

CORRECTIVE ACTION

Contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
FLOW METER ASSEMBLY, 6 IN. INLINE
PART NUMBER LD02021-006, DOES NOT INDICATE CORRECT AMOUNT OF FUEL PUMPED
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0154

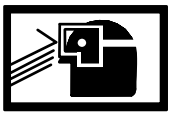
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, 6 IN. INLINE, PART NUMBER LD02021-006, DOES NOT INDICATE CORRECT AMOUNT OF FUEL PUMPED

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Flow meter assembly does not indicate the correct amount of fuel pumped.

MALFUNCTION

Register readout is not functioning properly.

CORRECTIVE ACTION

1. Replace register readout (WP 0154).
2. Perform operational checkout of the FSSP (WP 0014).
3. If flow meter assembly still does not indicate the correct amount of fuel pumped after replacing register readout, proceed to next malfunction.

FLOW METER ASSEMBLY, 6 IN. INLINE, PART NUMBER LD02021-006, DOES NOT INDICATE CORRECT AMOUNT OF FUEL PUMPED-CONTINUED

MALFUNCTION

Flow meter assembly still does not indicate the correct amount of fuel pumped.

CORRECTIVE ACTION

Contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
FLOW METER ASSEMBLY, 6 IN. INLINE
PART NUMBER LD02021-006, DOES NOT INDICATE FUEL FLOW
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References
WP 0014
WP 0109
WP 0154

Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, 6 IN., IN-LINE, PART NUMBER LD02021-006, DOES NOT INDICATE FUEL FLOW

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Flow meter assembly does not indicate fuel flow.

MALFUNCTION

Flow meter assembly clogged with debris at inlet hose connection.

CORRECTIVE ACTION

1. Perform the procedure to remove components with cam-lock connectors (WP 0109).
2. Clean debris from opening.
3. Perform the procedure to install components with cam-lock connectors (WP 0109).
4. Perform operational checkout of the FSSP (WP 0014).
5. If flow meter assembly still does not indicate fuel flow, proceed to next malfunction.

FLOW METER ASSEMBLY, 6 IN., IN-LINE, PART NUMBER LD02021-006, DOES NOT INDICATE FUEL FLOW-CONTINUED

MALFUNCTION

Register readout is inoperative.

CORRECTIVE ACTION

1. Replace register readout (WP 0154).
2. Perform operational checkout of the FSSP (WP 0014).
3. If flow meter assembly still does not indicate amount of fuel pumped after replacing register readout, proceed to next malfunction.

MALFUNCTION

Flow meter assembly still does not indicate fuel flow.

CORRECTIVE ACTION

Contact Sustainment Maintenance

END OF WORK PACKAGE

FIELD MAINTENANCE
FLOW METER ASSEMBLY, 6 IN. IN-LINE
PART NUMBER LD02021-006, LEAKS DURING OPERATION
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item17)

References

WP 0014
WP 0154

Personnel Required

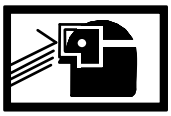
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

FLOW METER ASSEMBLY, 6 IN. IN-LINE, PART NUMBER LD02021-006, LEAKS DURING OPERATION

WARNING

CHEMICAL



EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Flow meter assembly leaks.

MALFUNCTION

Flow meter leaks between readout device and front cover.

CORRECTIVE ACTION

1. Perform the procedures to remove and install the register readout (WP 0154).
2. Perform operational checkout of the FSSP (WP 0014).

FLOW METER ASSEMBLY, 6 IN. IN-LINE, PART NUMBER LD02021-006, LEAKS DURING OPERATION-CONTINUED

MALFUNCTION

Flow meter assembly still leaks during operation.

CORRECTIVE ACTION

Contact Sustainment Maintenance

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL ADDITIVE INJECTOR ASSEMBLY, 6 IN. IN-LINE
PART NUMBER TPI-4T-4A-1
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required	Reference
Quartermaster and Chemical Repairman 63J Petroleum Supply Specialist 92F	TM 10-4930-364-13&P

TROUBLESHOOTING PROCEDURES

FUEL ADDITIVE INJECTOR ASSEMBLY, 6 IN. IN-LINE, PART NUMBER, TPI-4T-4A-1

Refer to TM 10-4930-364-13&P for troubleshooting the Fuel Additive Injector Assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL TANK, COLLAPSIBLE, BETA, 210K GAL.
PART NUMBER GTA-210K
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

References

TM 10-3835-242-14

TROUBLESHOOTING PROCEDURES

FUEL TANK, COLLAPSIBLE, BETA, 210K GAL., PART NUMBER GTA-210K

Refer to TM 10-3835-242-14 for troubleshooting the 210,000 gallon collapsible BFTA fuel tank.

END OF WORK PACKAGE

FIELD MAINTENANCE
WET WING DEFUELING ASSEMBLY
PART NUMBER 78029-100, COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

WP 0014
WP 0108
WP 0109
WP 0110

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURES

WET WING DEFUELING ASSEMBLY, PART NUMBER 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS

WARNING

CHEMICAL

EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

3 in. hose assembly leaking.

MALFUNCTION

Hose leaks.

CORRECTIVE ACTION

1. Repair 3 in. X 50 ft valve dry-break hose assembly (WP 0108).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact sustainment maintenance.

WET WING DEFUELING ASSEMBLY, PART NUMBER 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS

MALFUNCTION

Hose valve dry-break coupling leaks.

CORRECTIVE ACTION

1. Perform the procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact sustainment maintenance.

SYMPTOM

4 in. male cam-lock X 3 in. quick disconnect coupling half adapter leaks.

MALFUNCTION

Adapter valve quick disconnect coupling half or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform the procedure to replace gasket in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter cam-lock connector or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform the procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

WET WING DEFUELING ASSEMBLY, PART NUMBER, 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

4 in. female cam-lock X 3 in. quick disconnect coupling half adapter leaks.

MALFUNCTION

Adapter valve quick disconnect coupling half or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform the procedure to replace gaskets in valve quick disconnect coupling half (WP 0110).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter cam-lock connector or gasket is defective or damaged.

CORRECTIVE ACTION

1. Perform the procedure to replace gasket in cam-lock connectors (WP 0110).
2. Perform operational checkout of the FSSP (WP 0014).
3. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

3 in. hose assembly will not connect with other components.

MALFUNCTION

Hose quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform the procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform the procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout of the FSSP (WP 0014).
4. If corrective action fails, contact Sustainment Maintenance.

WET WING DEFUELING ASSEMBLY, PART NUMBER, 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

SYMPTOM

4 in. male cam-lock X 3 in. quick disconnect coupling half adapter will not connect with other components.

MALFUNCTION

Adapter valve quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform the procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform the procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout of the FSSP (WP 0014)
4. If corrective action fails, contact Sustainment Maintenance.

MALFUNCTION

Adapter cam-lock connectors damaged.

CORRECTIVE ACTION

1. Perform the procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform the procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout of the FSSP (WP 0014).
4. If corrective action fails, contact Sustainment Maintenance.

SYMPTOM

4 in. female cam-lock X 3 in. quick disconnect coupling half adapter will not connect with other components.

MALFUNCTION

Adapter valve quick disconnect coupling halves damaged.

CORRECTIVE ACTION

1. Perform the procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform the procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout of the FSSP (WP 0014).
4. If corrective action fails, contact Sustainment Maintenance.

WET WING DEFUELING ASSEMBLY, PART NUMBER, 78029-100 COMPONENTS LEAK OR WILL NOT JOIN WITH OTHER COMPONENTS – CONTINUED

MALFUNCTION

Adapter cam-lock connectors damaged.

CORRECTIVE ACTION

1. Perform the procedure to remove fuel system components with valve quick disconnect coupling half (WP 0109).
2. Perform the procedure to install replacement fuel system components with valve quick disconnect coupling half (WP 0109).
3. Perform operational checkout of the FSSP (WP 0014).
4. If corrective action fails, contact Sustainment Maintenance.

END OF WORK PACKAGE

FIELD MAINTENANCE
CONTAINER CARGO, TRICON
PART NUMBER BXTBCTTAT PD0003
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

References
TM 55-8145-203-13&P

TROUBLESHOOTING PROCEDURES

CONTAINER CARGO, TRICON, PART NUMBER BXTBCTTAT PD0003300

Refer to TM 55-8145-203-13&P for troubleshooting the Tricon Cargo Container, Part Number BXTBCTTAT PD0003.

END OF WORK PACKAGE

FIELD MAINTENANCE
CONTAINER CARGO, ISO 20-FT.
PART NUMBER BX2ACTP01D0000
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

References
TM 55-8115-204-13&P

TROUBLESHOOTING PROCEDURES

CONTAINER CARGO, ISO 20-FT, PART NUMBER BX2ACTP01D0000

Refer to TM 55-8115-204-13&P for troubleshooting the Cargo Container, ISO 20-FT, Part Number BX2ACTP01D0000.

END OF WORK PACKAGE

CHAPTER 5

OPERATOR MAINTENANCE INSTRUCTIONS FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

INTRODUCTION

General

Preventive Maintenance Checks and Services (PMCS) are performed to keep the fuel system supply point equipment in operating condition. The checks are used to find, correct or report problems. Operators are to do the PMCS as shown in the PMCS table. Preventive maintenance checks and services are performed every day the equipment is operated, using the PMCS table. Pay attention to WARNING and CAUTION statements. A WARNING means someone could be injured or killed. A CAUTION means equipment could get damaged.

Before you begin operating the equipment, conduct a before Preventive Maintenance Checks Services (PMCS).

During operation, perform During PMCS.

After operation, perform After PMCS.

Once a week do Weekly PMCS. If equipment has not been operated in a week, also perform a Before PMCS at the same time.

Do Monthly PMCS once a month. If the equipment has not been operated in a month, also perform an After PMCS at the same time.

If you are operating the equipment for the first time, do your Weekly and Monthly PMCS the first time you do your Before PMCS.

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

The right-hand column of the PMCS table list conditions that make the equipment not fully mission capable. Write up items 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 (WP 0170), notify Field Maintenance.

LEAKAGE DEFINITIONS

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

A I N

Equipment operation is allowed with minor leakages (Class I or II), except for fuel leaks. Of course, consideration must be given to the fluid capacity of the item or system being checked. When in doubt, ask your supervisor.

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

Class III leaks should be reported immediately to your Supervisor.

INTRODUCTION – CONTINUED

It is necessary for you to know how fluid leakage affects the status of the FSSP. Following are definitions of the classes of leakage an Operator needs to know to be able to determine the condition of the leak. Learn and then be familiar with them, and REMEMBER - WHEN IN DOUBT, ASK YOUR SUPERVISOR.

Leakage Definitions for Operator PMCS:

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 inspected.

CLASS III - Leakage of fluid great enough to form drops that fall from the item being inspected.

INSPECTION

Look for signs of a problem or trouble. You can feel, smell, hear or see many problems. Be alert when using the equipment.

Inspect to see if items are in good condition. Are they correctly assembled, stowed, secured, excessively worn, leaking, corroded or properly lubricated? Correct any problems found or notify Field Maintenance.

There are some common items to check all over the equipment. These include the following:

1. Bolts, clamps, nuts and screws: Continuously check for looseness. Look for chipped paint, bare metal, rust or corrosion around bolt and screw heads and nuts. Tighten them when you find them loose. If tools are not available, contact Field Maintenance.
2. Welds: Many items on the equipment are welded. To check these welds, look for chipped paint, rust, corrosion or gaps. When these conditions exist, notify Field Maintenance on DA Form 2404.
3. Electrical wires, connectors and harnesses: Tighten loose connectors. Look for cracked or broken insulation, bare wires and broken connectors. If any are found, notify Field Maintenance.
4. Hoses and fluid lines: Look for wear, damage and leaks, and make sure clamps and fittings are tight. Wet spots mean a leak. A stain by a fitting or connector can also mean a leak. When you find a leak, notify Field Maintenance.

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS

For safer, more trouble free operations, make sure that your equipment is serviced when it needs it.

LUBRICATION SERVICE INTERVALS - UNUSUAL CONDITIONS

Your equipment will require extra service and care when you operate under unusual conditions. High or low temperatures, long periods of hard use or continued use in sand, water, mud or snow will break down the lubricant, requiring you to add or change lubricant more often.

CLEANING AND LUBRICATION

Proper cleaning and lubrication can aid in avoiding possible problems or trouble, so make it a habit to do the following:

A I N

Follow all cleaning and lubrication instructions carefully; failure to do so can result in damage to equipment.

1. Thoroughly wash all equipment exposed to salt spray with clean, fresh water.

CLEANING AND LUBRICATION - CONTINUED

2. Clean parts to be lubricated with solvent cleaning compound, MIL-PRF-680 or equivalent. Do not use fluid or semi-fluid lubricant on SFD coated surfaces. Wipe surface dry before lubricating.
3. Clean grease fittings before lubrication.
4. Lubricate all equipment at conclusion of the operation before equipment storage.
5. Always use the PMCS lubrication instructions as a guide.
6. Never use too much lubricant.
7. Never use the wrong type or grade of lubricant.
8. Lubricate more during constant use and less during inactive periods.
9. Use the correct grade of lubricant for seasonal temperature expected.

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 is typically associated with rusting of metals or galvanic corrosion, which produces a white powder. Corrosion also includes deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling or breaking of the materials may be a corrosion problem. If a corrosion problem is identified, it can be reported using SF 368 Product Quality Deficiency Report. Use of key words, such as “corrosion, rust, deterioration” or “cracking”, will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA PAM 750-8.

OIL FILTERS

There are no oil filters in the FSSP.

ARMY OIL ANALYSIS PROGRAM (AOAP)

There are no components of the FSSP enrolled in the AOAP program.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) AND LUBRICATION PROCEDURES

INITIAL SETUP:

Personnel Required

Petroleum Supply Specialist 92F (16)

References

TM 5-5430-219-13
TM 10-4330-235-13&P
TM 10-4320-374-14
TM 10-4930-246-13&P

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) AND LUBRICATION PROCEDURES

1 HOSE ASSY, SUCTION, 4-IN X 10-FT
2 BERM, SPILL CONTAINMENT, 4X4 X 1-FT
3 FILTER SEPARATOR, FRAME MOUNTED, 350 GPM
4 PUMPING ASSY, 600 GPM
5 TEE ASSY, 4F X 4M X 4F
6 VALVE ASSY, BUTTERFLY, 4 IN (LH-F, RH-M)
7 VALVE ASSY, GATE, 4 IN (LH-F, RH-M)
8 EXTINGUISHER, FIRE, TYPE 1, CLASS 2, SIZE 20
9 NOZZLE, CLOSED CIRCUIT REFUELING
10 HOSE ASSY, DISCHARGE, 4 IN X 25 FT
11 NOZZLE, FUEL & OIL SERVICE, 1 IN
12 FUEL TANK, COLLAPSIBLE, BFTA, 210K GAL
13 REDUCER, 4F X 2M
14 TEE ASSY, 2 IN, VALVED BREAK DRY (AA59377-A2)
15 ADAPTER, F-QDISC X 2 IN VALVED BREAK DRY
16 ADAPTER, M-QDISC X 2 IN VALVED BREAK DRY
17 NOZZLE, FUEL & OIL SERVICE, 1.5IN
18 REDUCER, 2F X 1.5M
19 STAND ASSY, NOZZLE & VALVE
20 HOSE ASSY, SUCTION, 6IN X 10FT
21 VALVE ASSY, GATE, 6IN (LH-F, RH-M)
22 TEE ASSY, 6F X 6M X6M
23 TEE ASSY, 6M X 6F X 4F
24 REDUCER, 6F X4M
25 GROUND ROD ASSY, SELF-DRIVING
26 COUPLING, RAIL TANKER, NATO
27 NOZZLE ASSY, D-1, WITH 2 IN UNIXEX COUPLING
28 HOSE ASSY, DISCHARGE, 6 IN X 10 FT
29 HOSE ASSY, DISCHARGE, 6 IN X 25 FT
30 TEE ASSY, 6M X 6FX 4M
31 TEE ASSY, 6F X 6MX 6F
32 FLOW -METER ASSY, INLINE, 6 IN
33 WET WING DEFUELING KIT
34 TEE ASSY, 6F X 6F X 6M
35 TEE ASSY, 6F X 6M X 4M
36 NOZZLE ASSY, D-1, WITH 4M CAM LOCK COUPLING
37 NOZZLE ASSY, D-1, WITH 4F CAM LOCK COUPLING
38 BERM, SPILL CONTAINMENT, 6X8 X 1-FT
39 STRAINER, IN-LINE, 4 IN
40 ADAPTER, 4F X 6M
41 HOSE ASSY, DISCHARGE, 6 IN X 50 FT
42 TRICON
43 ISO CONTAINER
44 FUEL ADDITIVE INJECTOR ASSY
45 DISPLACEMENT & EVACUATION KIT 4-IN
46 DISPLACEMENT & EVACUATION KIT 6-IN
47 HOSE REPAIR KIT

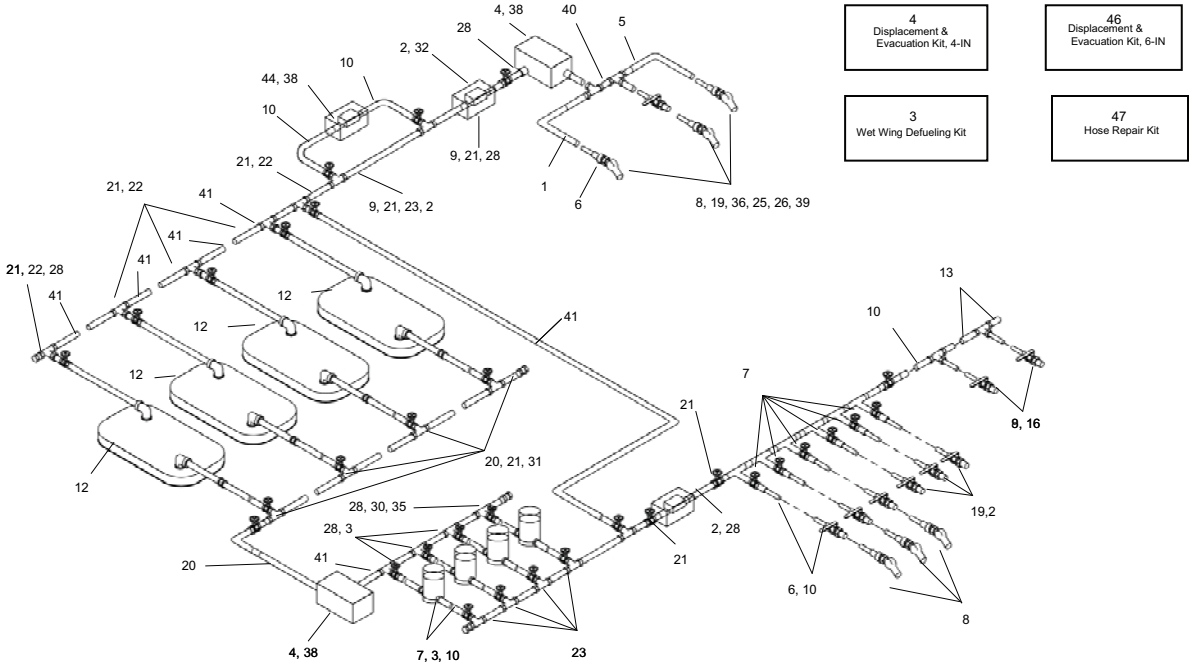


Figure 1. FSSP Components.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) AND LUBRICATION PROCEDURES – CONTINUED

Table 1. Preventive Maintenance Checks and Services (Before PMCS).

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
RECEIPT LINES AND RECEIVING PUMP					
1	Before	.2	Receipt Manifold Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace gaskets (WP 0109). If butterfly valves still leak, replace butterfly valves (WP 0109).	Class III leakage is found.
				2. Check fire extinguishers for serviceability and gauge for indication of full charge. If fire extinguishers are damaged or not fully charged, replace fire extinguishers.	Fire extinguishers are not fully charged or damaged.
				3. Check ground rods for damage that would prevent proper grounding of equipment. If ground rods are damaged, contact Field Maintenance.	Ground rods are damaged and will not ground equipment.
				4. Check fuel spill control kit for missing components. Reference (WP 0163) for a listing of components required in the fuel spill control kit.	
				5. Perform PMCS on D-1 nozzle per TM 10-4930-246-13&P.	D-1 nozzles are cracked, damaged or have missing parts.
				6. Check stand assembly for serviceability. If damage is found contact Field Maintenance.	
2.	Before	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
3.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
4.	Before	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4. (Continued)	Before	.2	Suction Hoses	2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
5.	Before	.2	Receiving 600 GPM Pumping Assembly	Perform PMCS TM 10-4230-374-13&P.	Class III leakage is found.
6	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
7.	Before	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valves hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
8.	Before	.2	6 In. Inline Flow meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If flowmeter still leaks, replace flowmeter (WP 0109).	Class III leakage is found.
				2. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, replace flow meter (WP 0109).	
				3. Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	Class III leakage is found.
				4. Check flow meter register readout for damage that would prevent proper operation. If damage is found contact Field Maintenance.	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
OUTGOING SUCTION TANK HOSES, INJECTORS, AND TANKS					
9.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
10.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
11.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Gate valves will not operate.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
12.	Before	.2	Fuel Additive Injection Assembly	Perform PMCS per Fuel Additive Injector TM 10-4930-364-13&P.	Class III leakage is found.
13.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
14.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
15.	Before	2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
16.	Before	.2	Fuel Tanks and Hose	Perform PMCS per TM 10-5430-239-12&P.	Class III leakage is found.
17.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
18.	Before	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
19.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
20.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE					
21.	Before	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
22.	Before	.2	Discharge 600 GPM Pumping Assembly	Perform PMCS per TM 10-4320-374-13&P.	
23.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
24.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
25.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
25. (Continued)	Before	.2	Gate Valves Assemblies	2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
26.	Before	.2	Fuel Sampling Probe Adapters	Check fuel sampling probe adapter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If adapter still leaks, replace adapter (WP 0109).	Class III leakage is found.
27.	Before	.2	Filter-Separators	Perform PMCS per TM 10-4320-374-13&P.	
28.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
29.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
30.	Before	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
31.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
32.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
33.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
34.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheel for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valve for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
35.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
DISTRIBUTION POINTS					
36.	Before	.2	6 In Flow Meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If flow meter still leaks, replace flow meter (WP 0109).	Class III leakage is found.
				2. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
				3. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, contact Field Maintenance.	Class III leakage is found.
				4. Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	Class III leakage is found.
37.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
38.	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valve will not operate.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
38. (Continued)	Before	.2	Gate Valves Assemblies	3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valve will not operate.
39.	Before	.2	Tee Assembly	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
40	Before	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valve will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valve will not operate.
41.	Before	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
42.	Before	.2	Distribution Point Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If butterfly valves till leak, replace butterfly valves (WP 0109).	Class III leakage is found.
				2. Check fire extinguishers for serviceability and gauge for indication of full charge for indication of full charge. If fire extinguishers are damaged or not fully charged, replace fire extinguishers.	Fire extinguishers are not fully charged or damaged.
				3. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

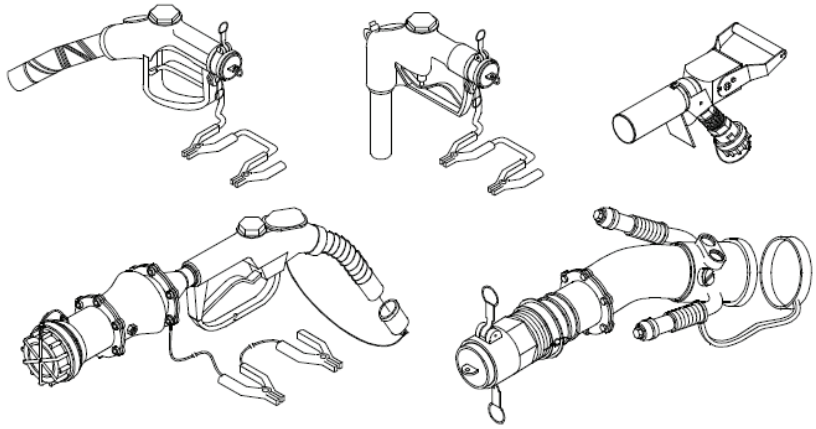
ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					
43.	Before	.2	Nozzles	1. Check nozzles for cracks, damage or missing parts. If damage is found, replace nozzle assembly (WP 0109).	Nozzles are cracked, damaged or have missing parts. Class III leakage is found.
				2. Check control handle for proper operation. If handle does not operate properly, replace nozzle assembly (WP 0109).	Control handle does not operate properly
				3. Check couplings for damage and for missing gaskets. If damage is found, replace gaskets (WP 0109).	Couplings are damaged or gaskets are missing. Class III leakage is found.
				4. Perform PMCS on D1 nozzle per TM 10-4930-248-13&P.	

Table 1. Preventive Maintenance Checks and Services (Before PMCS) – Continued.

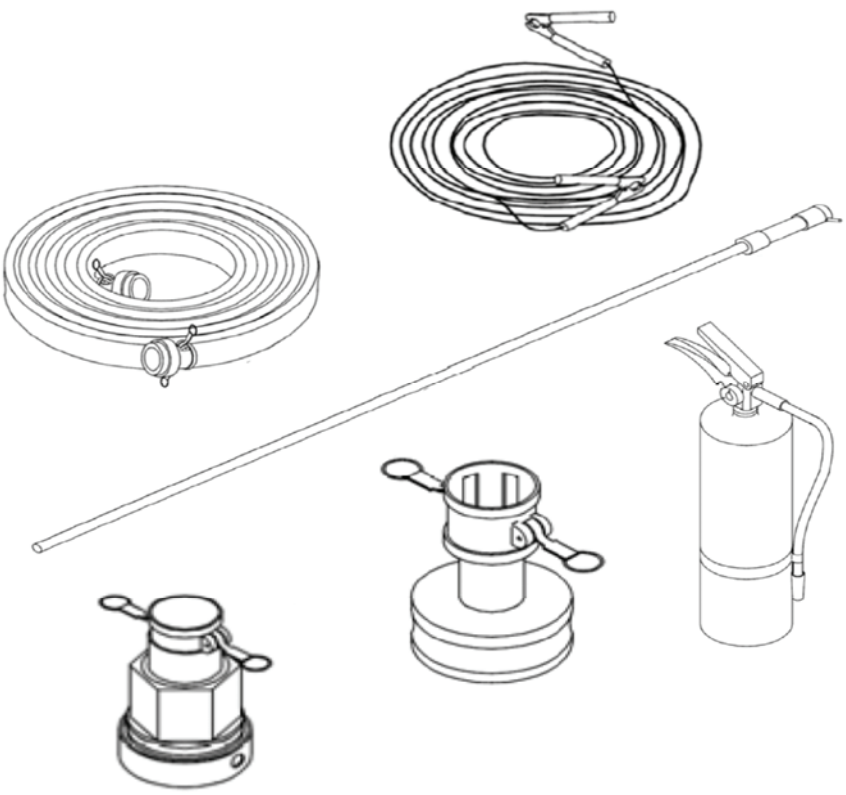
ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					
44.	Before	.2	Pressure Regulator Wet Wing Defueling Assembly	Check Pressure Regulator for damage that would prevent proper operation. If damage is found contact Field Maintenance (WP 0109).	
45.	Before	.2	Wet Wing Defueling Assembly	Check connectors, hoses, nozzle and couplings for damage or missing gaskets. If coupling gaskets are missing, replace gaskets (WP 0110). If damage is found, replace damaged components.	Connectors, hoses, nozzle and couplings are damaged or gaskets are missing. Class III leakage is found

Table 1. Preventive Maintenance Checks and Services (Before/During PMCS) – Continued.

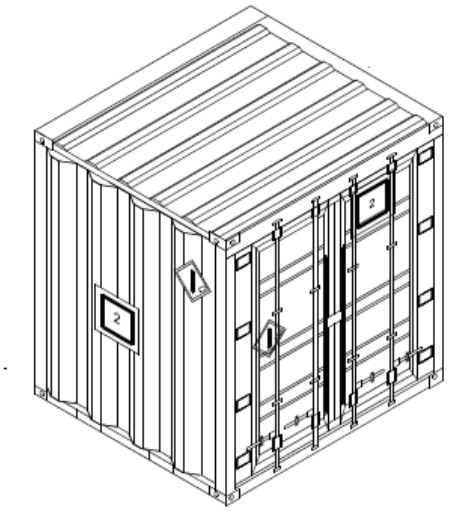
ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					
46.	Before	.2	TRICON	1. Check exterior of container for damage. If damage is found; contact Field Maintenance. 2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	
47.	Before	.2	ISO Container	1. Check exterior of container for damage. If damage is found; contact Field Maintenance. 2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	
RECEIPT LINES AND RECEIVING PUMP					
1.	During	.2	Receipt Manifold Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace gaskets (WP 0110). If butterfly valves still leak, replace butterfly valves (WP 0109). 2. Check ground rods for damage that would prevent proper grounding of equipment. If ground rods are damaged, contact Field Maintenance	Class III leakage is found. Ground rods are damaged and will not ground equipment.
2.	During	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2. (Continued)	During	.2	Suction Hoses	2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
3.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
4.	During	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
5.	During	.2	Receiving 600 GPM Pumping Assembly	1. Perform PMCS per TM 10-4320-374-13&P.	Class III leakage is found.
				2. Check receiving 600 GPM pumping assembly spill containment berm for evidence of fuel leakage. If fuel is found in spill containment berm, clean up spill (WP 0012) and perform troubleshooting procedures to correct leak per TM 10-4320-374-13&P.	Class III leakage is found.
6.	During	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
7	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8.	During	.2	6 In. Inline Flow Meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If flow meter still leaks, replace flow meter (WP 0109).	Class III leakage is found.
				2. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
				3. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, contact Field Maintenance.	Class III leakage is found.
				4. Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	Class III leakage is found.
				5. Check receiving flow meter assembly spill containment berm for evidence of fuel leakage. If fuel is found in spill containment berm, clean up spill (WP 0012). If leakage is found, replace coupling gaskets (WP 0110). If flow meter still leaks, contact Field Maintenance.	Class III leakage is found.
OUTGOING SUCTION TANK HOSES, INJECTORS, AND TANKS					
9.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
10.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
12.	During	.2	Fuel Additive Injection Assembly	Perform PMCS per Fuel Additive Injector TM 10-4930-364-13&P.	Class III leakage is found. Ground rod is damaged and will not ground equipment.
13.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
14.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
15.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
16.	During	.2	Fuel Tanks and Hoses	Perform PMCS per TM 10-5430-239-12&P	
17.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
18.	During	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
19.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
20.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE					
21.	During	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
22.	During	.2	Discharge 600 GPM Pumping Assembly	1. Perform PMCS per TM 10-4320-374-13&P.	
				2. Check receiving 600 GPM Pumping assembly spill containment berm for evidence of fuel leakage. If fuel is found in spill containment berm, clean up spill (WP 0012) and perform troubleshooting procedures to correct leak per TM 10-4320-374-13&P.	Class III leakage is found.
23.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
23. (Continued)	During	.2	Discharge Hoses	2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
24.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
25.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
26.	During	.2	Fuel Sampling Probe Adapters	Check fuel sampling probe adapter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If adapter still leaks, replace adapter (WP 0109).	Class III leakage is found.
27.	During	.2	Filter-Separators	1. Perform PMCS per TM 10-4320-374-13&P.	
				2. Check filter-separators spill containment berm for evidence of fuel leakage. If fuel is found in spill containment berm, clean up spill (WP 0012) and perform troubleshooting procedures to correct fuel leak. (WP 0016).	Class III leakage is found.
28.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
29.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
30.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
31.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
32.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
33.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
34.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
35.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
DISTRIBUTION POINTS					
36.	During	.2	6 In. Flow Meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If flow meter still leaks, replace flow meter (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
36. (Continued)	During	.2	6 In. Flow Meter Assembly	2. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, contact Field Maintenance.	Class III leakage is found.
				Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	Class III leakage is found.
				4. Check flow meter spill containment berm for evidence of fuel leakage. If fuel is found in spill containment berm, clean up spill (WP 0012). Replace coupling gaskets (WP 0110). If flow meter still leaks, replace flow meter (WP 0109).	Class III leakage is found.
37.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
38.	During	.2	Gate Valve Assemblies	Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
39.	During	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
40.	During	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

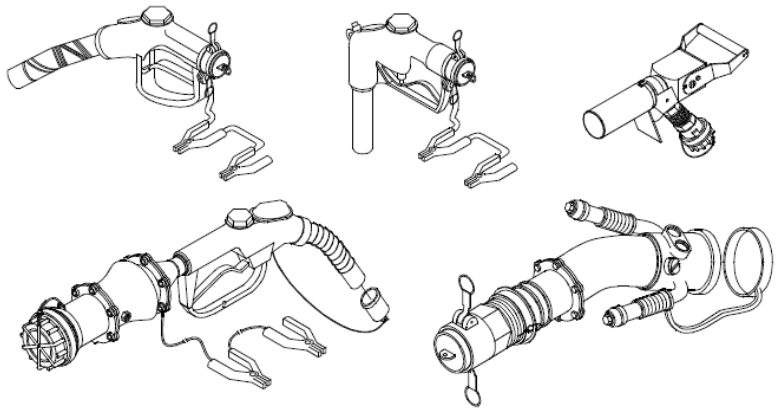
ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
41.	During	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
42.	During	.2	Distribution Point Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If butterfly valves till leak, replace butterfly valves (WP 0109).	Class III leakage is found.
				2. Check fire extinguishers for serviceability and gauge for indication of full charge for indication of full charge. If fire extinguishers are damaged or not fully charged, replace fire extinguishers.	Fire extinguishers are not fully charged or damaged.
				3. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
					
43.	During	.2	Nozzles	1. Check nozzles for cracks, damage or missing parts. If damage is found, replace nozzle assembly (WP 0109).	Nozzles are cracked, damaged or have missing parts. Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
43. (Continued)	During	.2	Nozzles	2. Check control handle for proper operation. If handle does not operate properly, replace nozzle assembly (WP 0109).	Control handle does not operate properly.
				3. Check couplings for damage and for missing gaskets. If damage is found, replace gaskets (WP 0110).	Couplings are damaged or gaskets are missing. Class III leakage is found.
				4. Perform PMCS on D1 nozzle per TM 10-4930-248-13&P.	
44.	During	.2	Pressure Regulator	Check Pressure Regulator for damage that would prevent proper operation. If damage is found contact Field Maintenance.	
45.	During	.2	Wet Wing Defueling Assembly	Check connectors, hoses, nozzle and couplings for damage or missing gaskets. If coupling gaskets are missing, replace gaskets (WP 0110). If damage is found, replace damaged components (WP 0109).	Connectors, hoses, nozzle and couplings are damaged or gaskets are missing. Class III leakage is found.
46.	During	.2	TRICON	1. Check exterior of container for damage. If damage is found; contact Field Maintenance.	
				2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	
47.	During	.2	ISO Container	1. Check exterior of container for damage. If damage is found; contact Field Maintenance.	
				2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	
RECEIPT LINES AND RECEIVING PUMP					
1.	After	.2	Receipt Manifold Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace gaskets (WP 0110). If butterfly valves still leak, replace butterfly valves (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (During/After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1. (Continued)	After	.2	Receipt Manifold Butterfly Valves	2. Check fire extinguishers for serviceability and gauge for indication of full charge. If fire extinguishers are damaged or not fully charged, replace fire extinguishers.	Fire extinguishers are not fully charged or damaged.
				3. Check ground rods for damage that would prevent proper grounding of equipment. If ground rods are damaged, contact Field Maintenance.	Ground rods are damaged and will not ground equipment.
				4. Check fuel spill control kit for missing components. Reference (WP 0163) for a listing of components required in the fuel spill control kit.	
				5. Check nozzles for cracks, damage or missing parts. If damage is found, replace nozzle assembly (WP 0109).	Nozzles are cracked, damaged or have missing parts.
				6. Check control handle for proper operation. If handle does not operate properly, replace nozzle assembly (WP 0109).	Control handle does not operate properly
2.	After	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
3.	After	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
4.	After	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5.	After	.2	Receiving 600 GPM Pumping Assembly	Perform PMCS per TM 10-4320-374-13&P.	Class III leakage is found.
6.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	
7.	After	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valves hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
8.	After	.2	6 In. In-Line Flow Meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If leakage or damage is found, replace flow meter (WP 0109).	Class III leakage is found
				2. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, replace flow meter (WP 0109).	Class III leakage is found.
				3. Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	
				4. Check ground rods for damage that would prevent proper grounding of equipment. If ground rods are damaged, contact Field Maintenance.	

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
OUTGOING SUCTION HOSES, INJECTORS, AND TANKS					
9.	After	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
10.	After	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
11.	After	.2	Discharge Hoses	1. Check hoses for any damage that may have cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
12.	After	.2	Fuel Additive Injection Assembly	1. Perform PMCS per Fuel Additive Injector TM 10-4930-364-13&P.	Class III leakage is found.
				2. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
13.	After	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
14.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	
15.	After	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
16.	After	.2	Fuel Tanks and Hose	Perform PMCS per TM 10-5430-239-12&P.	
17.	After	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
18.	After	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19.	After	.2		Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.
20.	After	.2	Gate Valve Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
DISCHARGE PUMP, FILTER-SEPARATOR AND RECIRCULATION LINE					
21.	After	.2	Suction Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, replace hose (WP 0109).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
22.	After	.2	Discharge 600 GPM Pumping Assembly	Perform PMCS per TM 10-4320-374-13&P.	Class III leakage is found.
23.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
24.	After	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
25.	After	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
26.	After	.2	Fuel Sampling Probe	Check fuel sampling probe adapter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If adapter still leaks, replace adapter (WP 0109).	Class III leakage is found.
27.	After	.2	Filter-Separators	Perform PMCS per TM 10-4320-374-13&P.	
28.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
29.	After	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
30.	After	.2	Tee Assemblies	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee still leaks, replace tee (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
31	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
32.	After	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.
33.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110. If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
34.	After	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valves will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valves will not operate.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
35.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
DISTRIBUTION POINTS					
36.	After	.2	6 In. Flow Meter Assembly	1. Check flow meter coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If flow meter still leaks, replace flow meter (WP 0109).	Class III leakage is found.
				2. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
				3. Check flow meter body for leakage or damage that would prevent proper operation. If leakage or damage is found, replace flow meter (WP 0109).	Class III leakage is found.
				4. Check flow meter register readout for damage that would prevent proper operation. If damage is found, contact Field Maintenance.	
37.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
38.	After	.2	Gate Valves Assembly	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
38. (Continued)	After	.2	Gate Valves Assembly	2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valve will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valve will not operate.
39.	After	.2	Tee Assembly	Check tee coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If tee assembly still leaks, replace tee assembly (WP 0109).	Class III leakage is found.
40.	After	.2	Gate Valves Assemblies	1. Check gate valve coupling halves for leakage. If leakage is found, replace coupling gaskets (WP 0110). If gate valve still leaks, replace gate valve assembly (WP 0109).	Class III leakage is found.
				2. Check gate valve hand wheels for damage. If damage is found, replace gate valve assembly (WP 0109).	Gate valve will not operate.
				3. Check gate valves for smooth operation. If gate valve does not operate properly, replace gate valve assembly (WP 0109).	Gate valve will not operate.
41.	After	.2	Discharge Hoses	1. Check hoses for any damage that may cause leakage. If damage is found that will cause leakage, repair hose (WP 0108).	Class III leakage is found.
				2. Check coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If hose still leaks, replace hose (WP 0109).	Class III leakage is found.
42.	After	.2	Distribution Point Butterfly Valves	1. Check butterfly valve lever and coupling halves for leakage. If found, replace coupling gaskets (WP 0110). If butterfly valves still leak, replace butterfly valves (WP 0109).	Class III leakage is found.
				2. Check fire extinguishers for serviceability and gauge for indication of full charge. If fire extinguishers are damaged or not fully charged, replace fire extinguishers.	Fire extinguishers are not fully charged or damaged.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

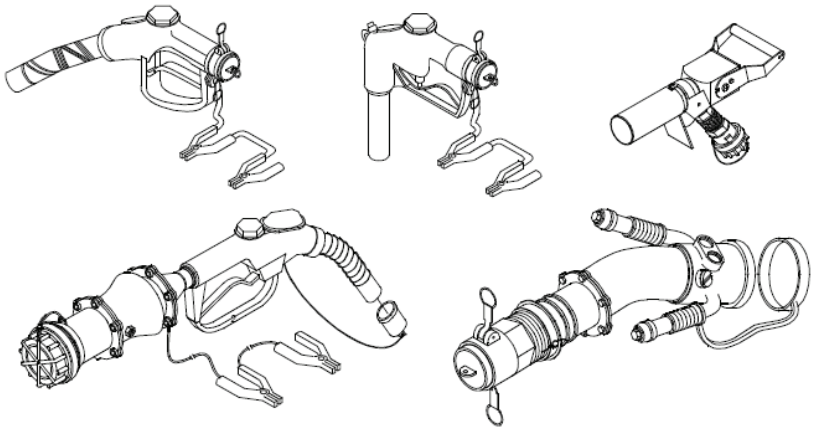
ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
42. (Continued)	After	.2	Distribution Point Butterfly Valves	3. Check ground rod for damage that would prevent proper grounding of equipment. If ground rod is damaged, contact Field Maintenance.	Ground rod is damaged and will not ground equipment.
					
43.	After	.2	Nozzles	1. Check nozzles for cracks, damage or missing parts. If damage is found, replace nozzle assembly (WP 0109).	Nozzles are cracked, damaged or have missing parts. Class III leakage is found.
				2. Check control handle for proper operation. If handle does not operate properly, replace nozzle assembly (WP 0109).	Control handle does not operate properly
				3. Check couplings for damage and for missing gaskets. If damage is found, replace gaskets (WP 0110).	Couplings are damaged or gaskets are missing. Class III leakage is found.
				4. Perform PMCS on D1 nozzle per TM 10-4930-248-13&P.	
44.	After	.2	Pressure Regulator	Check Pressure Regulator for damage that would prevent proper operation. If damage is found contact Field Maintenance.	Connectors, hoses, nozzle and couplings are damaged or gaskets are missing. Class III leakage is found.

Table 1. Preventive Maintenance Checks and Services (After PMCS) – Continued.

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
45.	After	.2	Wet Wing Defueling Assembly	Check connectors, hoses, nozzle and couplings for damaged or missing gaskets. If coupling gaskets are missing replace gaskets (WP 0110). If damage is found, replace damaged components (WP 0109).	
46.	After	.2	TRICON Container	1. Check exterior of container for damage. If damage is found; contact Field Maintenance. 2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	
47.	After	.2	ISO Container	1. Check exterior of container for damage. If damage is found; contact Field Maintenance. 2. Check access door for proper operation or damaged seal. If door does not operate properly or seal is damaged, contact Field Maintenance.	

END OF WORK PACKAGE

OPERATOR MAINTENANCE
RUPTURED FUEL SYSTEM HOSES
REPAIR

INITIAL SETUP:

Tools

Displacement and evacuation kit, 6 in. (WP 0163, Item 19)
Displacement and evacuation kit, 4 in. (WP 0163, Item 19)
Hose repair kit (WP 0163, Item 30)
Fuel spill control kit, (WP 0163, Item 24)
Pan, drip (WP 0165, Item 24)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Apron, utility (WP 0165, Item 2)

Personnel Required

Petroleum Supply Specialist 92F

Materials/Parts

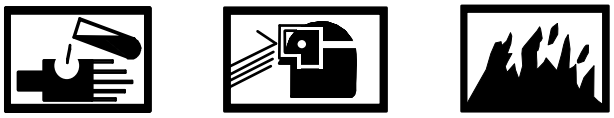
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Petrolatum technical (WP 0165, Item 9)
Kit, fuel spill control (WP 0165, Item 8)
Gasket (3) (WP 0166, Item 38)
Clamp performed (8) (WP 0165, Item 3)

Equipment Condition

Hose assembly removed from FSSP (WP 0109).

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND)

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

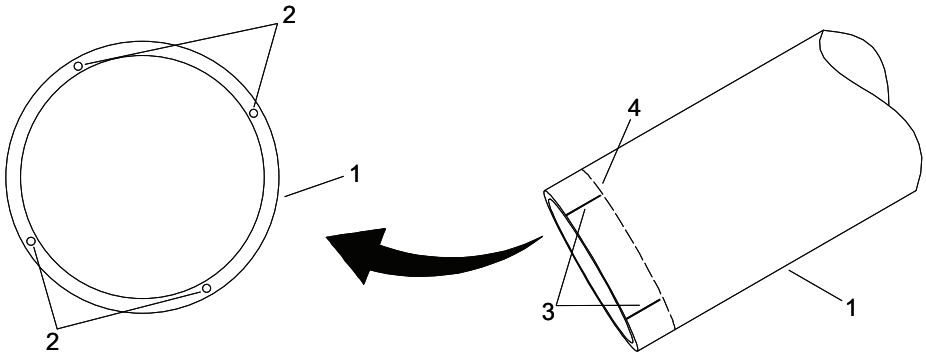


Figure 1. Hose Assembly Repair.

1. Place drip pan under hose assembly (Figure 1, Item 1) to be repaired.

N

Place clamp on both sides of damaged hose using Displacement and Evacuation Kit, 4 in. (WP 0163, Item 19) if repairing the hose while fuel is in the FSSP.

2. Inspect hose assembly (Figure 1, Item 1) to identify the extent of damage.

WARNING

SHARP OBJECT

Sharp object in hand shows that a sharp object presents a danger to limb.

N

All cuts removed any damaged areas should be made perpendicular to the hose length.

3. Using a knife, remove the damaged portion by cutting the hose assembly (Figure 1, Item 1) on both sides of the damaged area. Discard damaged hose assembly (Figure 1, Item 1) fabric.

N

There are 4 ground wires per hose assembly. They are identified by a red colored dot when looking directly at the cut end of the hose assembly**.**

4. Locate the position of the ground wire (Figure 1, Item 2) in the hose assembly (Figure 1, Item 1).

5. Using a marking pen, draw a line (Figure 1, Item 3) approximately 1 to 1-1/4 in., down the length of the hose assembly (Figure 1, Item 1) to show the location of each ground wire (Figure 1, Item 2).

6. Using a marking pen, draw a radial line (Figure 1, Item 4) around the hose assembly (Figure 1, Item 1) approximately 1 to 1-1/4 in. back from the cut end of the hose assembly (Figure 1, Item 1).

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

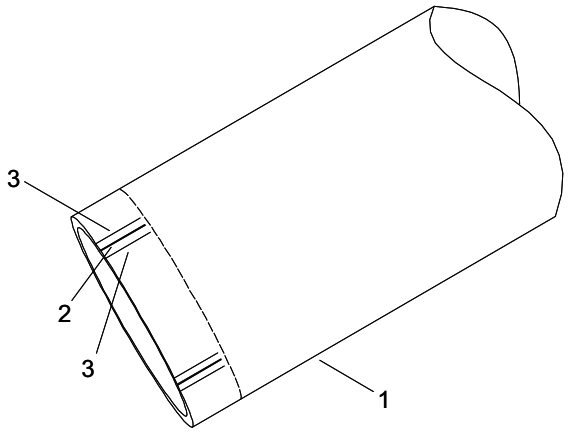


Figure 2. Hose Assembly Repair.

N

Be careful not to cut completely through the hose fabric.

7. Using a knife, expose the ground wire (Figure 2, Item 2) by cutting the hose assembly (Figure 2, Item 1) fabric parallel to the length line (Figure 1, Item 3) previously marked not to exceed ½ of the hose assembly thickness (be sure not to cut completely through the hose assembly fabric). Cut approximately ¼ in. (Figure 2, Item 3) on both sides of the length wise line (Figure 1, Item 3).

N

Cut must be on the outer side of the reinforcement threads and the ground wire. Always cut towards cut end of the hose.

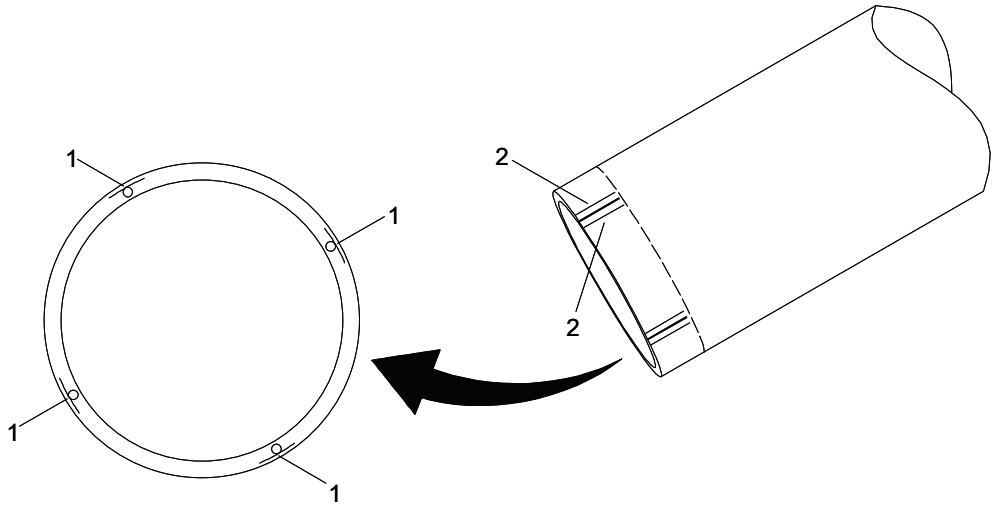


Figure 3. Hose Assembly Repair.

8. Using a knife, cut the hose assembly fabric (Figure 3, Item 1) at the open end of the hose assembly approximately ¼ in. deep between the two lengthwise (Figure 3, Item 2) cuts previously made.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

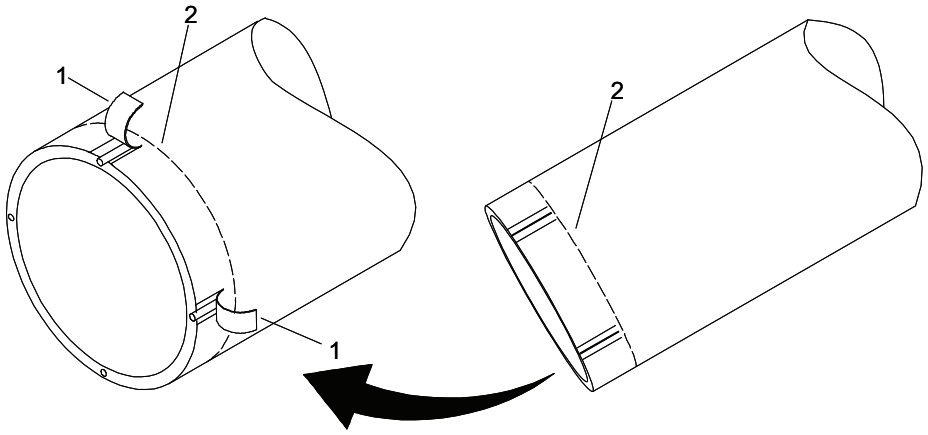


Figure 4. Hose Assembly Repair.

9. Using needle nose pliers, pull the outer layer of the hose assembly fabric (Figure 4, Item 1) back by grabbing the outer layer of the hose assembly fabric (Figure 4, Item 1) and rolling the pliers toward the radial line (Figure 4, Item 2) previously marked on the hose assembly.
10. Using a knife cut the rolled back hose assembly fabric (Figure 4, Item 1) along the radial (Figure 4, Item 2). Discard excess hose assembly fabric (Figure 4, Item 1).

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

A I N

Ground wire is very fragile. Ensure it is not cut or damaged during removal of hose assembly fabric. Failure to comply could affect continuity integrity.

N

After removing the hose assembly fabric, ensure the ground wire is visible with the red thread surrounding the actual ground wire.

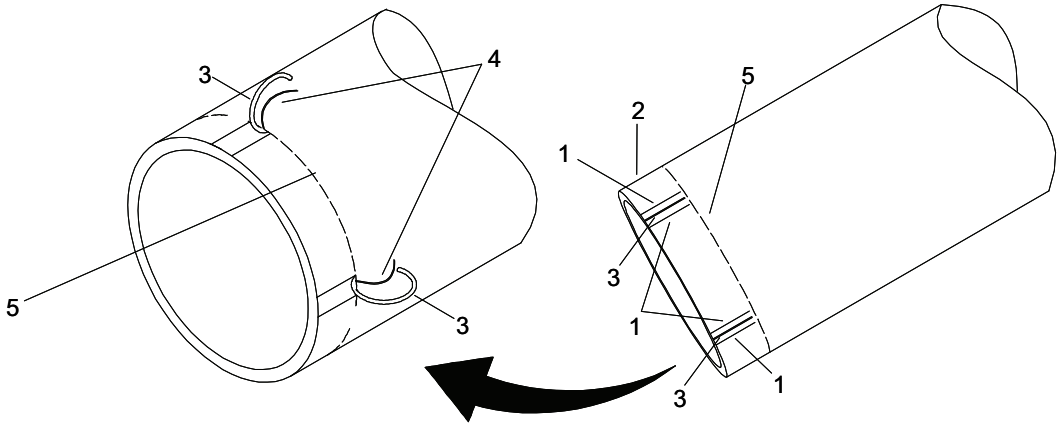


Figure 5. Hose Assembly Repair.

11. Using a knife, cut the reinforcement threads (Figure 5, Item 1) of the hose assembly fabric (Figure 5, Item 2) by cutting along each side of the ground wire (Figure 5, Item 3) as close as possible without cutting the ground wire (Figure 5, Item 3) or the red filament (Figure 5, Item 4) surrounding the ground wire (Figure 5, Item 3). Ensure not to cut all the way through the hose assembly fabric (Figure 5, Item 2).
12. Using the needle nose pliers, expose the ground wire (Figure 5, Item 3) back to the radial line (Figure 5, Item 5) by grabbing the ground wire (Figure 5, Item 3) and rolling the pliers so that the ground wire (Figure 5, Item 3) is rolled back over the pliers jaws.

N

If the ground wire is hard to pull back, the reinforcement threads will need to be cut again. There is no resistance felt when rolling back the wire.

13. Using the needle nose pliers, hold the ground wire (Figure 5, Item 3) so that it doesn't get damaged and cut the hose assembly fabric (Figure 5, Item 2) at the radial line (Figure 5, Item 5), removing the rest of the hose assembly fabric (Figure 5, Item 2) from around the ground wire (Figure 5, Item 3). Discard excess hose assembly fabric (Figure 5, Item 2).

N

The other three ground wires must be exposed in the same manner as described above.

14. Expose the other three ground wires (Figure 5, Item 3) using steps 4-13

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

15. After all four ground wires (Figure 5, Item 3) have been exposed, cut all excess hose assembly (Figure 5, Item 2) fabric out at the radial line (Figure 5, Item 5) previously marked. Discard excess hose assembly (Figure 5, Item 2) fabric.
16. Remove the red filament (Figure 5, Item 4) surrounding each ground wire (Figure 5, Item 3). Discard red filament (Figure 5, Item 4).

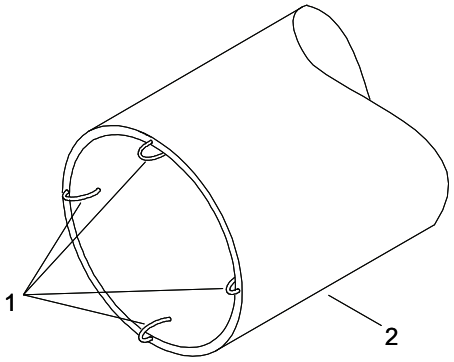


Figure 6. Hose Assembly Repair.

17. Using needles nose pliers, carefully bend the ground wire (Figure 6, Item 1) inside the hose assembly (Figure 6, Item 2).

N

The ground wires must be exposed from the other section of hose assembly in the same manner before proceeding to the next step.

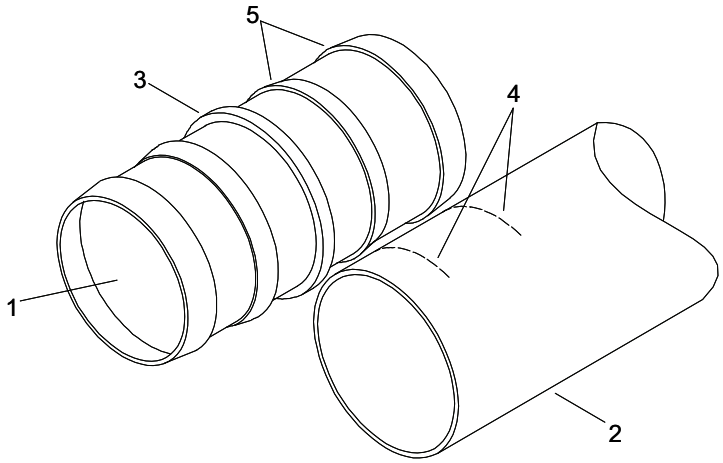


Figure 7. Hose Assembly Repair.

18. Using the hose splice (Figure 7, Item 1) as a guide, align the cut end of one section of hose assembly (Figure 7, Item 2) with the machined stop (Figure 7, Item 3) in the center of the hose splice (Figure 7, Item 1).
19. Using a marking pen, mark two lines (Figure 7, Item 4) on the hose assembly (Figure 7, Item 2) where the hose barbs (Figure 7, Item 5) will be located.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

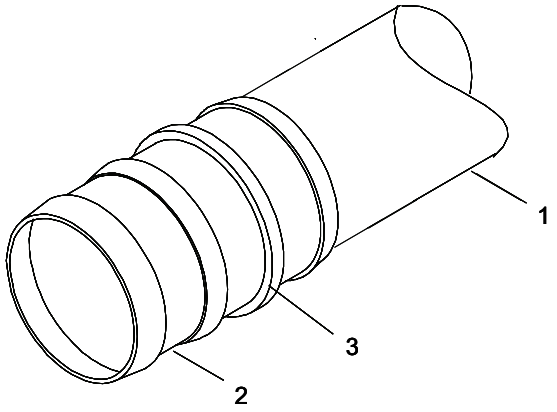


Figure 8. Hose Assembly Repair.

20. Install the hose assembly (Figure 8, Item 1) on the hose splice (Figure 8, Item 2) until it is flush with the machined stop (Figure 8, Item 3) in the center of the hose splice (Figure 8, Item 2).

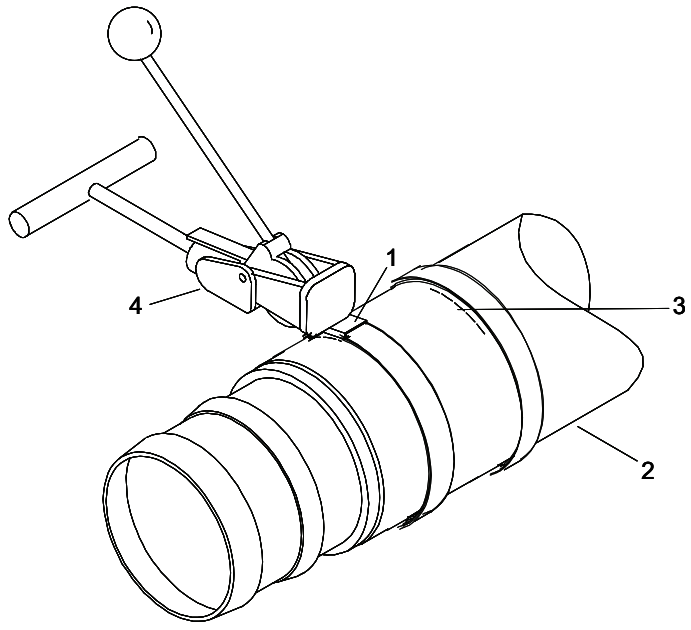


Figure 9. Hose Assembly Repair.

21. Position the first clamp (Figure 9, Item 1) on the hose assembly (Figure 9, Item 2) until it is aligned with the first mark (Figure 9, Item 3) previously made on the hose assembly.
22. Using clamping tool (Figure 9, Item 4), tighten the clamp (Figure 9, Item 1) until almost flush with the hose assembly (Figure 9, Item 2) surface.
23. Ensure the bridge buckle is installed.
24. Tighten clamp (Figure 9, Item 1) until the clamp (Figure 9, Item 1) cannot be tightened by hand any further.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) – CONTINUED

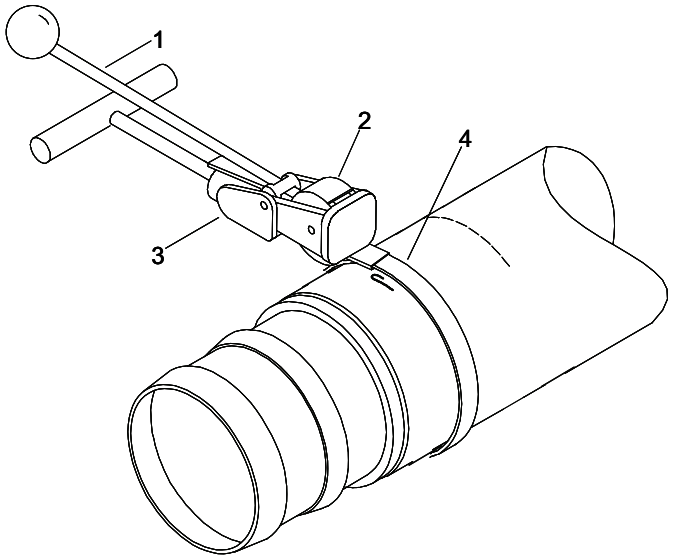


Figure 10. Hose Assembly Repair.

25. While holding the clamping tool handle (Figure 10, Item 1) in the down position, strike the center punch anvil (Figure 10 Item 2) three to four times with a hammer.
26. While holding the clamping tool handles (Figure 10, Item 1) together in the down position, raise and lower the entire clamping tool (Figure 10, Item 3) multiple times to shear the tail of the band off of the clamp (Figure 10, Item 4).
27. Using hammer, tap the edge of the distorted clamp (Figure 10, Item 4) down to a level configuration.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

N

All clamps should be installed so that the clamp buckle is oriented a minimum of 30 degrees away from the previously installed clamp buckle.

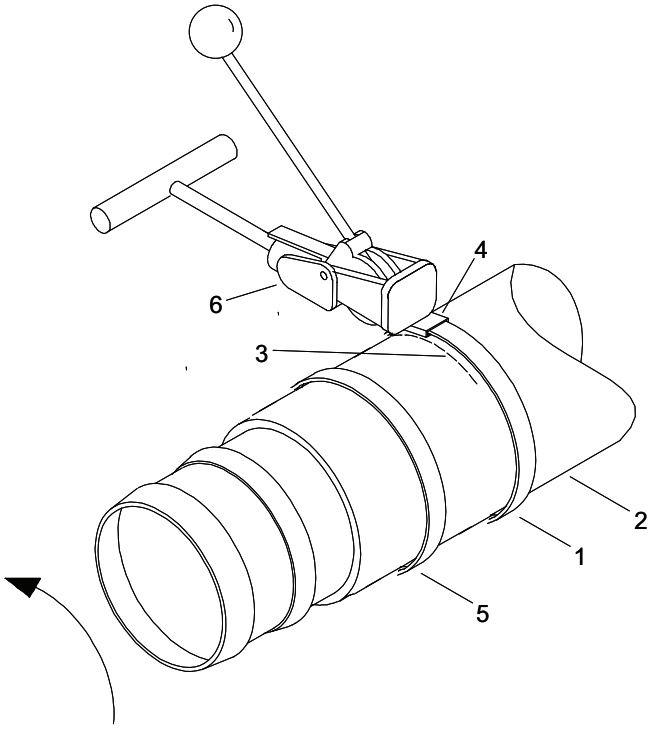


Figure 11. Hose Assembly Repair.

28. Position a clamp (Figure 11, Item 1) on the hose assembly (Figure 11, Item 2) until it is aligned with the second mark (Figure 11, Item 3) previously made on the hose assembly (Figure 11, Item 2).
29. Rotate the hose assembly (Figure 11, Item 2) until clamp buckle (Figure 11, Item 4) on the clamp (Figure 11, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the first clamp (Figure 11, Item 5).
30. Using clamping tool (Figure 11, Item 6) procedure steps 22-27 to install clamp (Figure 11, Item 1), on hose assembly (Figure 11, Item 2).

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

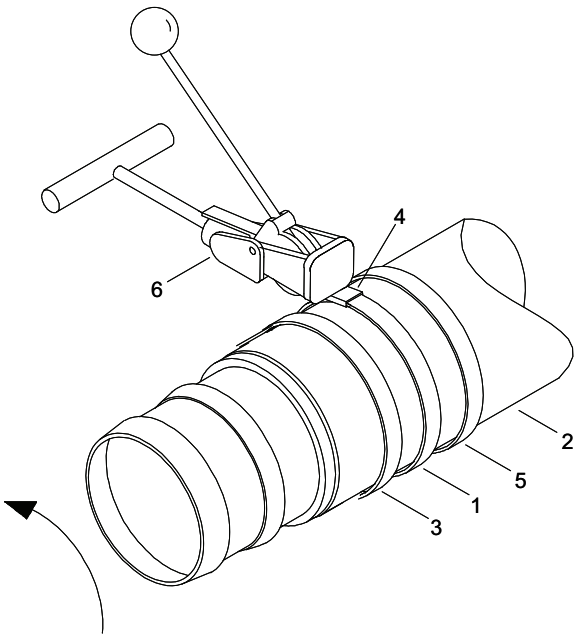


Figure 12. Hose Assembly Repair.

31. Position the third clamp (Figure 12, Item 1) on the hose assembly (Figure 12, Item 2) until it is positioned with a gap of 1/8-1/4 in. from the first clamp (Figure 12, Item 3).
32. Rotate the hose assembly (Figure 12, Item 2) until clamp buckle (Figure 12, Item 4) on the third clamp (Figure 12, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the second clamp (Figure 12, Item 5).
33. Using clamping tool (Figure 12, Item 6), refer to steps 22-27 to install clamp (Figure 12, Item 1) onto the hose assembly (Figure 12, Item 2) surface.

REPAIR 4 IN. DISCHARGE HOSE (KIDDE BRAND) AND 3 IN. AND 2 IN. DISCHARGE HOSE (DURODYNE BRAND) - CONTINUED

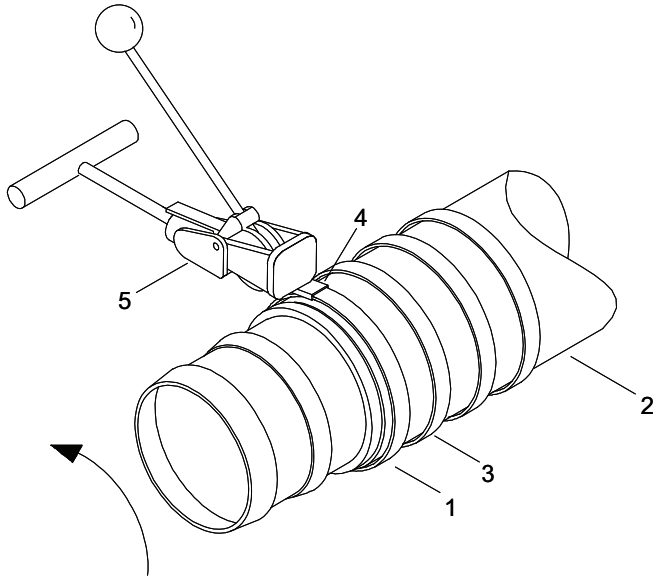


Figure 13. Hose Assembly Repair.

34. Position the fourth clamp (Figure 13, Item 1) on the hose assembly (Figure 13, Item 2) until it is positioned with a gap of 1/8-1/4 in. from the first clamp (Figure 13, Item 3).

35. Rotate the hose assembly (Figure 13 Item 2) until clamp buckle (Figure 13, Item 4) on the fourth clamp (Figure 13, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the first clamp (Figure 13, Item 3).

36. Using clamping tool (Figure 13, Item 5), refer to steps 22-27 to install clamp (Figure 13, Item 1) on hose assembly (Figure 13, Item 2) surface.

N

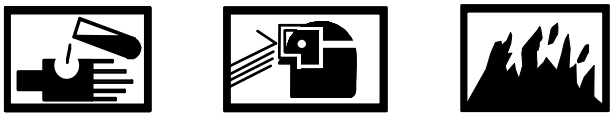
Place all four clamps on hose assembly before installing hose on the other half of the splice.

37. Repeat steps 3 – 36 to splice the other hose assembly section to the hose splice.
38. Remove drip pans and dispose of contents per local procedures.
39. Clean up spill fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND)

WARNING



CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Place clamp on both sides of the damaged area using the Displacement and Evacuation Kit, 6 in. (WP 0163, Item 19) if repairing the hose while fuel is in the system.

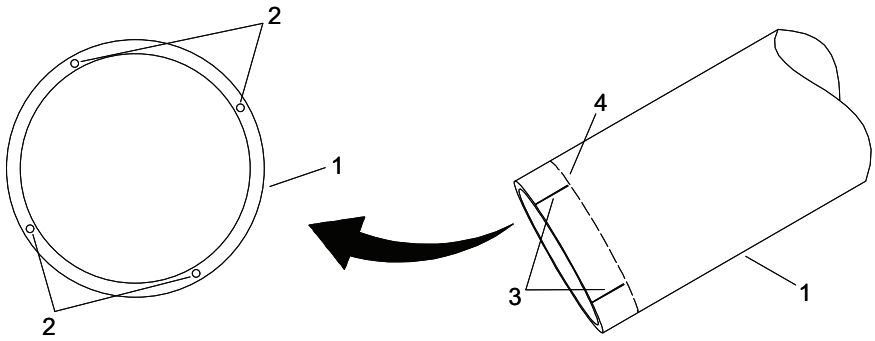


Figure 14. Hose Assembly Repair.

1. Place drip pan under hose assembly (Figure 14, Item 1) to be repaired.
2. Inspect hose assembly (Figure 14, Item 1) to identify the extent of damage.

WARNING

SHARP OBJECT

Sharp object in hand shows that a sharp object presents a danger to limb.

N

All cuts to remove any damaged areas should be made perpendicular to the hose length.

3. Using a knife, remove the damaged portion by cutting the hose assembly (Figure 14, Item 1) on both sides of the damaged area. Discard damaged hose assembly (Figure 14, Item 1) fabric.

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND) - CONTINUED

N

There are 4 ground wires per hose assembly. They are identified by a red colored dot when looking directly at the cut end of the hose assembly.

4. Locate the position of the ground wire (Figure 14, Item 2) in the hose assembly (Figure 14, Item 1).

5. Using a marking pen, draw a line (Figure 14, Item 3) approximately 1 to 1-1/4 in., down the length of the hose assembly (Figure 14, Item 1) to show the location of each ground wire (Figure 14, Item 2).

6. Using a marking pen, draw a radial line (Figure 14, Item 4) around the hose assembly (Figure 14, Item 1) approximately 1 to 1-1/4 in. back from the cut end of the hose assembly (Figure 14, Item 1).

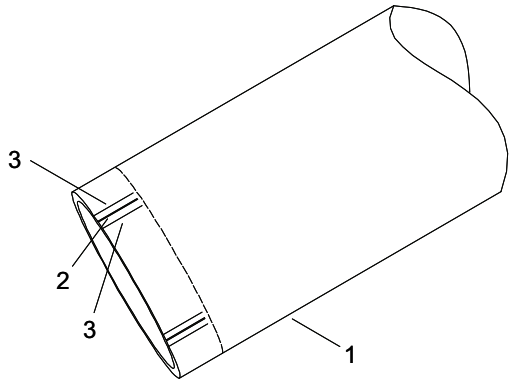


Figure 15. Hose Assembly Repair.

N

Be careful not to cut completely through the hose fabric.

7. Using a knife, expose the ground wire (Figure 15, Item 2) by cutting the hose assembly (Figure 15, Item 1) fabric parallel to the length line (Figure 15, Item 3) previously marked not to exceed ½ of the hose assembly thickness (be sure not to cut completely through the hose assembly fabric). Cut approximately ¼ in. (Figure 15, Item 3) on both sides of the length wise line (Figure 14, Item 3).

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND) - CONTINUED

N

Cut must be on the outer side of the reinforcement threads and the ground wire. Always cut towards end that was cut on the hose.

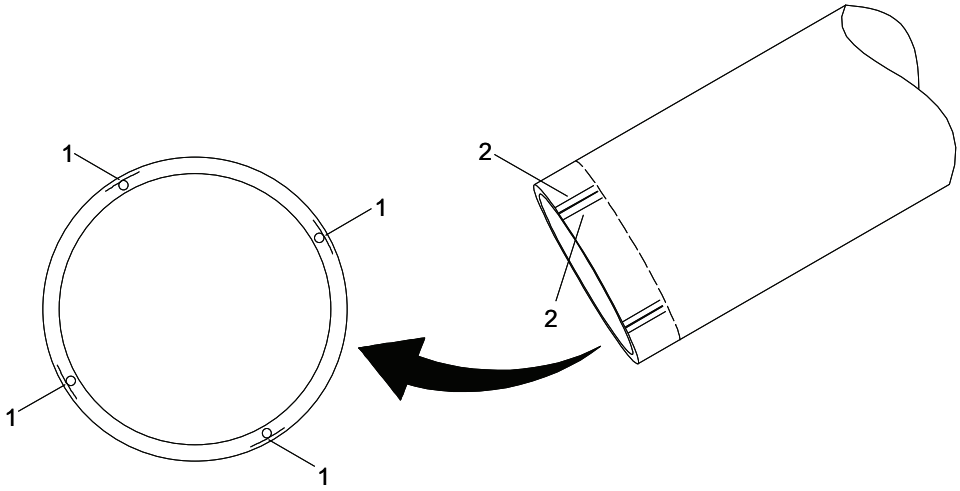


Figure 16. Hose Assembly Repair.

8. Using a knife, cut the hose assembly fabric (Figure 16, Item 1) at the open end of the hose assembly approximately ¼ in. deep between the two lengthwise (Figure 16, Item 2) cuts previously made.

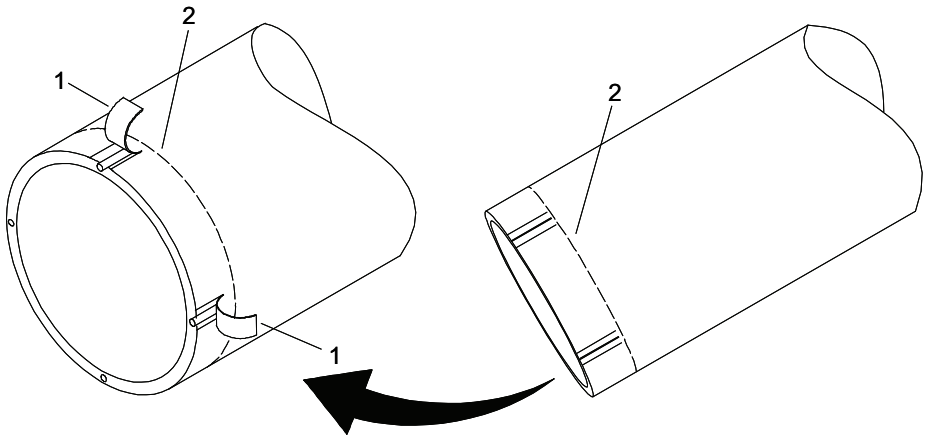


Figure 17. Hose Assembly Repair.

9. Using needle nose pliers, pull the outer layer of the hose assembly fabric (Figure 17, Item 1) back by grabbing the outer layer of the hose assembly fabric (Figure 17, Item 1) and rolling the pliers toward the radial line (Figure 17, Item 2) previously marked on the hose assembly.
10. Using a knife cut the rolled back hose assembly fabric (Figure 17, Item 1) along the radial (Figure 17, Item 2). Discard excess hose assembly fabric (Figure 17, Item 1).

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND) - CONTINUED

A I N

Ground wire is very fragile. Ensure it is not cut or damaged during removal of hose assembly fabric. Failure to comply could affect continuity integrity.

N

After removing the hose assembly fabric, ensure the ground wire is visible with the red thread surrounding the actual ground wire.

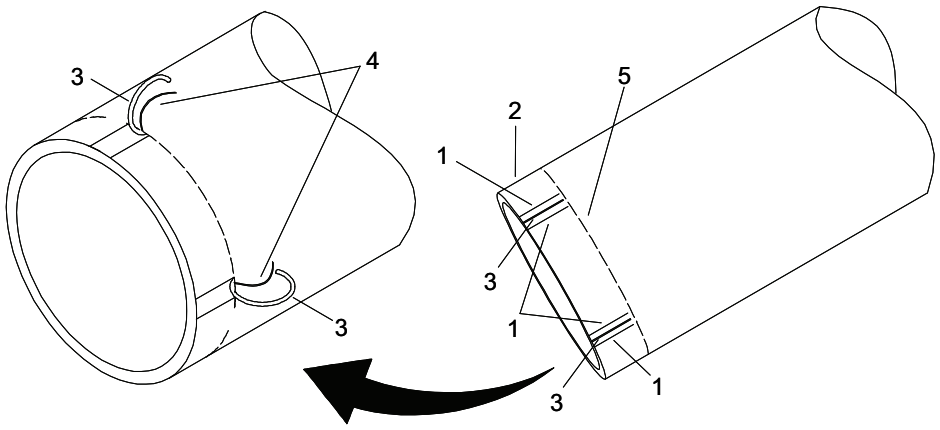


Figure 18. Hose Assembly Repair.

11. Using a knife, cut the reinforcement threads (Figure 18, Item 1) of the hose assembly fabric (Figure 18, Item 2) by cutting along each side of the ground wire (Figure 18, Item 3) as close as possible without cutting the ground wire (Figure 18, Item 3) or the red filament (Figure 18, Item 4) surrounding the ground wire (Figure 18, Item 3). Ensure not to cut all the way through the hose assembly fabric (Figure 18, Item 2).
12. Using the needle nose pliers, expose the ground wire (Figure 18, Item 3) back to the radial line (Figure 18, Item 5) by grabbing the ground wire (Figure 18, Item 3) and rolling the pliers so that the ground wire (Figure 18, Item 3) is rolled back over the pliers jaws.

N

If the ground wire is hard to pull back, the reinforcement threads will need to be cut again if there is no resistance felt when rolling back the wire.

N

Contact Field Maintenance to inspect ends of hose for damaged or missing ground wires. Field Maintenance uses a multimeter to perform a continuity test of ground wire from one end of hose to the other. Continuity must exist.

13. Using the needle nose pliers, hold the ground wire (Figure 18, Item 3) so that it doesn't get damaged and cut the hose assembly fabric (Figure 18, Item 2) at the radial line (Figure 18, Item 5), removing the rest of the hose assembly fabric (Figure 18, Item 2) from around the ground wire (Figure 18, Item 3). Discard excess hose assembly fabric (Figure 18, Item 2).

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND) - CONTINUED

N

The other three ground wires must be exposed in the same manner as described above.

14. Expose the other three ground wires (Figure 18, Item 3) using the same procedures.
15. After all four ground wires (Figure 18, Item 3) have been exposed, cut all excess hose assembly (Figure 18, Item 2) fabric out at the radial line (Figure 18, Item 5) previously marked. Discard excess hose assembly (Figure 18, Item 2) fabric.
16. Remove the red filament (Figure 18, Item 4) surrounding each ground wire (Figure 18, Item 3). Discard red filament (Figure 18, Item 4).

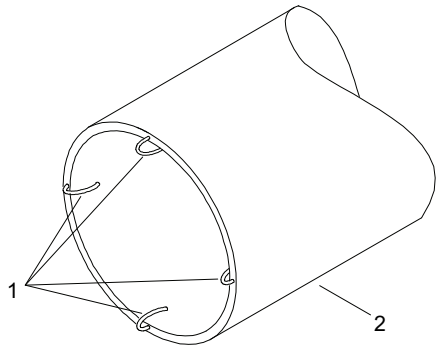


Figure 19. Hose Assembly Repair.

17. Using needles nose pliers, carefully bend the ground wire (Figure 19, Item 1) inside the hose assembly (Figure 19, Item 2).

N

The ground wires must be exposed from the other section of hose assembly in the same manner before proceeding to the next step.

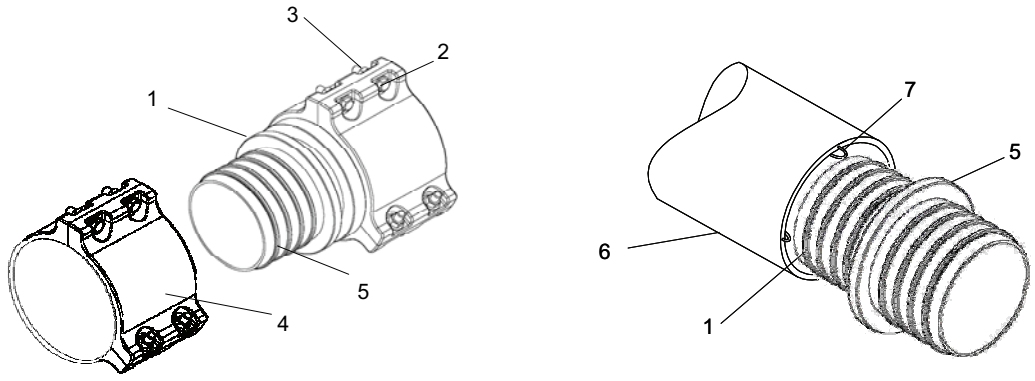


Figure 20. Hose Assembly Repair.

18. Remove four segment bolts (Figure 20, Item 2) and four nuts (Figure 20, Item 3) from one segment clamp (Figure 20, Item 4) of the 6 inch hose mender (Figure 20, Item 1).

REPAIR 6 IN. DISCHARGE HOSE (KIDDE BRAND) - CONTINUED

19. Loosen the two additional clamp bolts on the segment clamp (Figure 20, Item 4).

20. Separate segment clamp (Figure 20, Item 4) from the 6 in. hose mender (Figure 20, Item 1) where bolts have been removed.

21. Lightly lubricate the seal (Figure 20, Item 5) on hose mender with petrolatum.

22. Slide hose (Figure 20, Item 6) over coupler and ensure that the ground wires (Figure 20, Item 7) are between the interior wall of the hose (Figure 20, Item 6), and the coupler (Figure 20, Item 1).

23. Once the hose is seated against the shoulder, install the segment clamp (Figure 20, Item 4).

N

Verify segment clamp is matched to fit over coupler shoulder with matching groove in segment clamp.

24. Tighten the six clamp bolts (Figure 20, Item 2) and nuts (Figure 20, Item 3) with a wrench in small increments, using a criss-cross pattern until all bolts are tightened.

25. Repeat steps 18-24 for other side of hose.

26. Remove drip pans and dispose of contents per local procedures.

27. Clean up spill fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND)

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

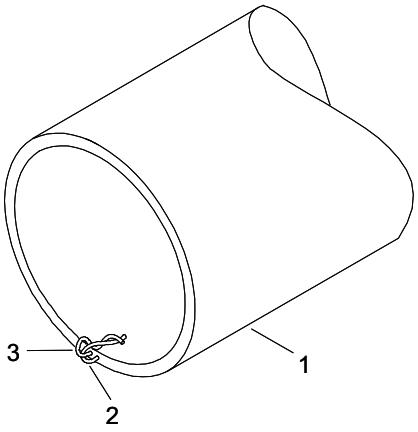


Figure 21. Hose Assembly Repair.

1. Place drip pan under hose assembly (Figure 21, Item 1) to be repaired.
2. Inspect hose assembly (Figure 21, Item 1) to identify the extent of damage to the hose assembly Figure 21, Item 1).

WARNING

Metal wire coil may be sharp and/or jagged after hose is hack sawed apart. Take care to avoid personnel injury.

N

All cuts to remove any damaged areas should be made perpendicular to the hose length.

3. Using a hacksaw, remove the damaged portion of the hose assembly (Figure 21, Item 1) by cutting the hose assembly (Figure 21, Item 1) on both sides of the damaged area. Discard damaged hose (Figure 21, Item 1).
4. Identify the metal wire coil (Figure 21, Item 2).
5. Using needle nose pliers, pull the metal wire coil (Figure 21, Item 2) approximately ½ in. out of the hose assembly (Figure 21, Item 1) so the metal wire coil (Figure 21, Item 2) is exposed.
6. Using needle nose pliers cut a piece of copper wire (Figure 21, Item 3) approximately 1-1/2 to 2 inches long.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

7. Insert and center the piece of copper wire (Figure 21, Item 3) under the metal wire coil and into the hose assembly (Figure 21, Item 1) approximately ½ in. away from the end of the metal wire (Figure 21, Item 2), to ensure copper wire will not slide off.

N

If two ground wires exist, insert and wrap a piece of copper wire on both.

8. Using needle nose pliers, wrap the copper wire (Figure 21, Item 3) around the metal wire coil (Figure 21, Item 2) together, forming a pigtail.
9. Using needle nose pliers, carefully bend the copper wire (Figure 21, Item 2) inside the hose assembly (Figure 21, Item 1) so that it will contact the hose splice when assembled.

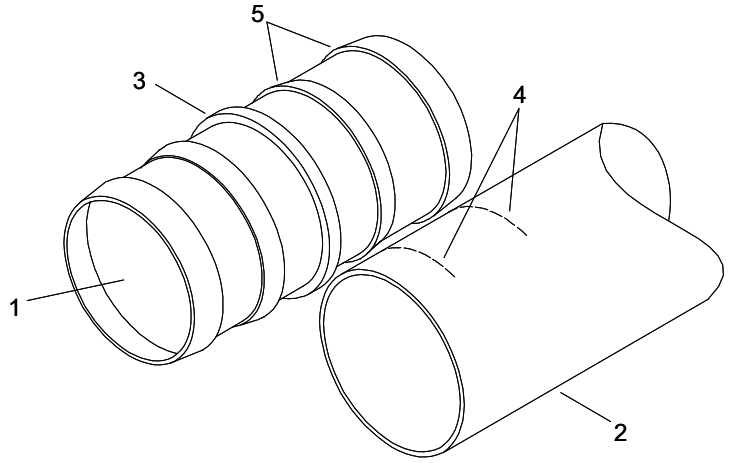


Figure 22. Hose Assembly Repair.

10. Using the hose splice (Figure 22, Item 1) as a guide, align the cut end of one section of the hose assembly (Figure 22, Item 2) with the machined stop (Figure 22, Item 3) in the center of the hose splice (Figure 22, Item 1).
11. Using a marking pen, mark two lines (Figure 22, Item 4) on the hose assembly (Figure 22, Item 2) where the hose barbs (Figure 22, Item 5) will be located.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

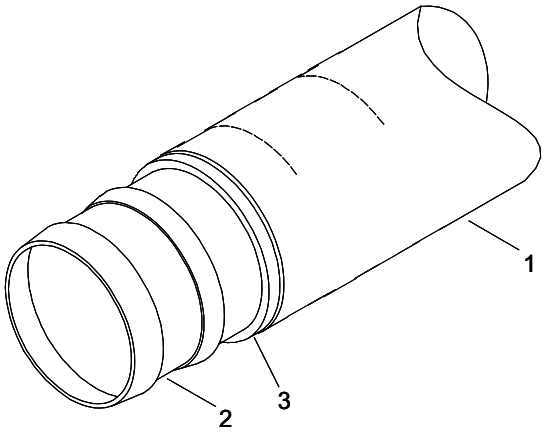


Figure 23. Hose Assembly Repair.

12. Install the hose assembly (Figure 23, Item 1) on the hose splice (Figure 23, Item 2) until it is flush with the machined stop (Figure 23, Item 3) in the center of the hose splice (Figure 23, Item 2).

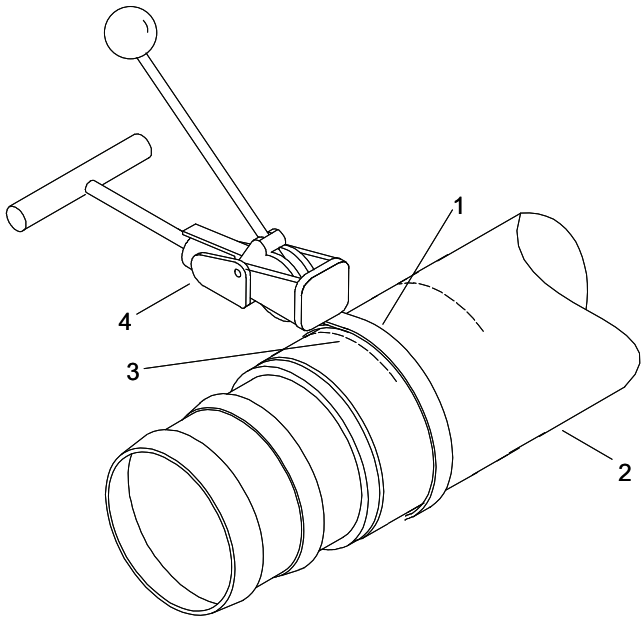


Figure 24. Hose Assembly Repair.

13. Position the first clamp (Figure 24, Item 1) on the hose assembly (Figure 24, Item 2) until it is aligned with the first mark (Figure 24, Item 3) previously made on the hose assembly (Figure 24, Item 2).
14. Ensure the bridge buckle is installed.

N

Ensure buckle is 30 degrees away from closest buckle.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

15. Using clamping tool (Figure 24, Item 3), tighten the clamp (Figure 24, Item 1) until almost flush with the hose assembly (Figure 24, Item 2) surface.
16. Tighten clamp (Figure 24, Item 1) until the clamp (Figure 24, Item 1) cannot be tightened by hand any further.

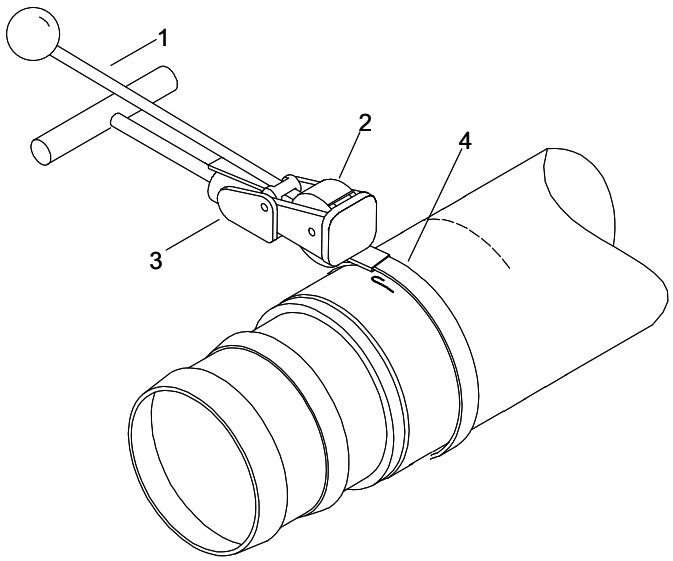


Figure 25. Hose Assembly Repair.

17. While holding the clamping tool handle (Figure 25, Item 1) in the down position, strike the center punch anvil (Figure 25, Item 2) three to four times with a hammer.
18. While holding the clamping tool handles (Figure 25, Item 1) together in the down position, raise and lower the entire clamping tool (Figure 25, Item 3) multiple times to shear the tail of the band off of the clamp (Figure 25, Item 4).
19. Using hammer, tap the edge of the distorted clamp (Figure 25, Item 4) down to a level configuration.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

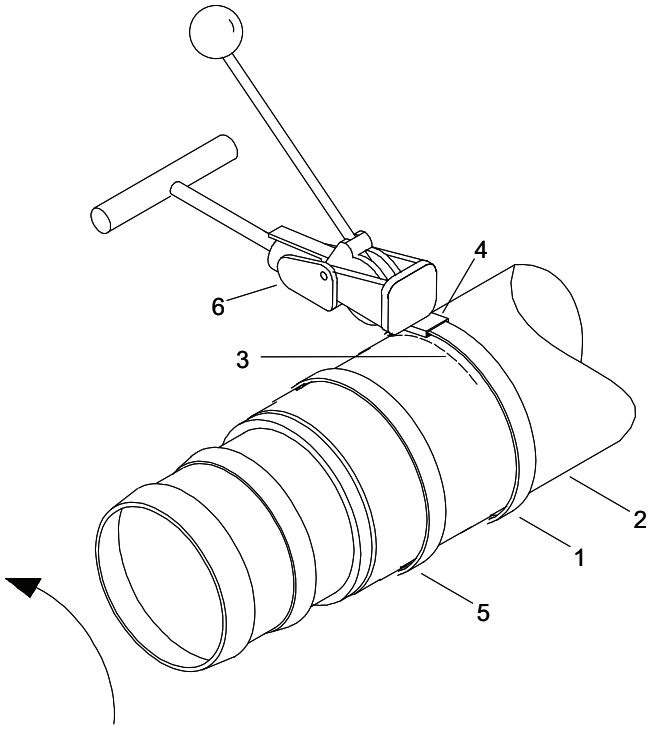


Figure 26. Hose Assembly Repair.

N

All clamps should be installed so that the clamp buckle is oriented a minimum of 30 degrees away from the previously installed clamp buckle.

20. Position the second clamp (Figure 26, Item 1) on the hose assembly (Figure 26, Item 2) until it is aligned with the second mark (Figure 26, Item 3) previously made on the hose assembly (Figure 26, Item 2).
21. Using clamping tool (Figure 26, Item 6), refer to steps 14-19 to install clamp (Figure 26, Item 1) on the hose assembly (Figure 26, Item 2) surface.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

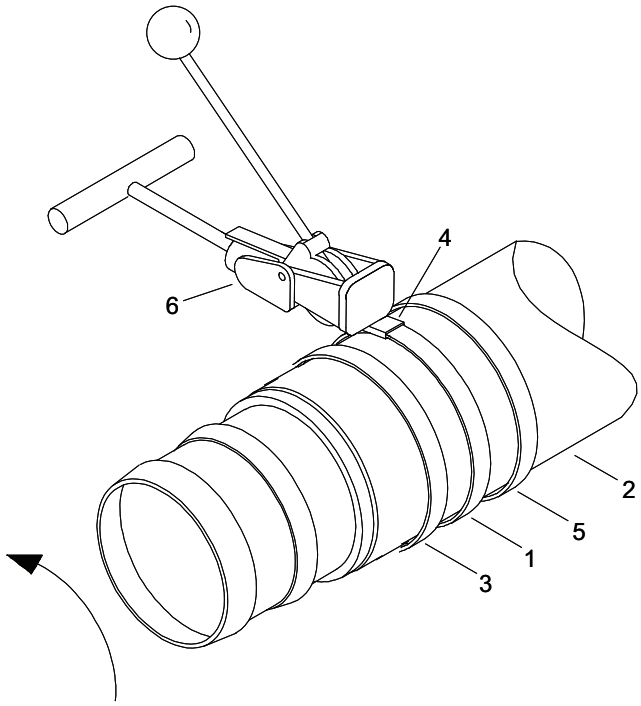


Figure 27. Hose Assembly Repair.

22. Position the third clamp (Figure 27, Item 1) on the hose assembly (Figure 27, Item 2) until it is positioned with a gap of 1/8-1/4 in. from the first clamp (Figure 27, Item 3).
23. Rotate the hose assembly (Figure 27, Item 2) until clamp buckle (Figure 27, Item 4) on the third clamp (Figure 27, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the second clamp (Figure 27, Item 5).
24. Using clamping tool (Figure 27, Item 6), refer to steps 14–19 to install clamp (Figure 27, Item 6) on the hose assembly (Figure 27, Item 2) surface.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

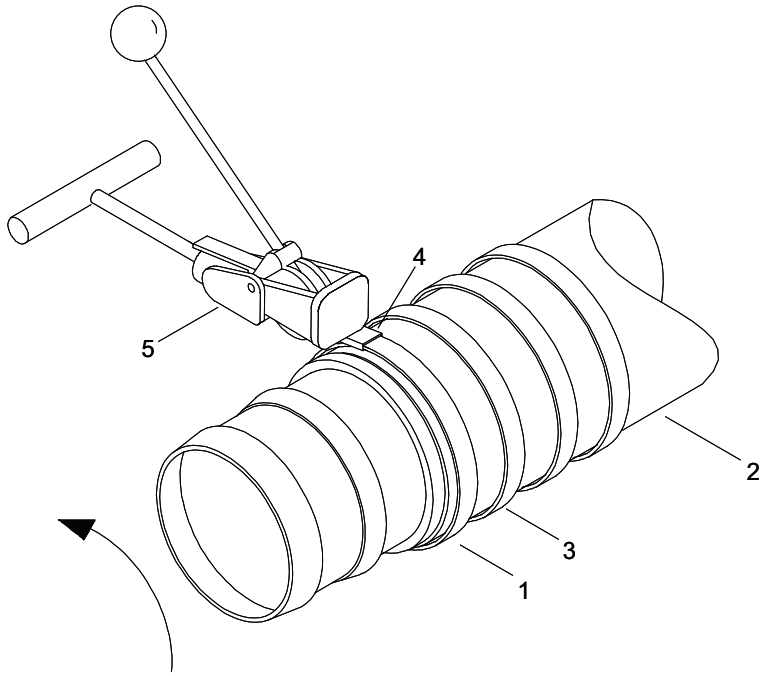


Figure 28. Hose Assembly Repair.

25. Position the fourth clamp (Figure 28, Item 1) on the hose assembly (Figure 28, Item 2) until it is positioned with a gap of 1/8-1/4 in. from the first clamp (Figure 28, Item 3).
26. Rotate the hose assembly (Figure 28 Item 2) until clamp buckle (Figure 28, Item 4) on the fourth clamp (Figure 28, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the first clamp (Figure 28 Item 3).
27. Using clamping tool (Figure 28, Item 5), refer to 14-19 to install clamp (Figure 28, Item 1) on hose assembly (Figure 28, Item 2) surface.

N

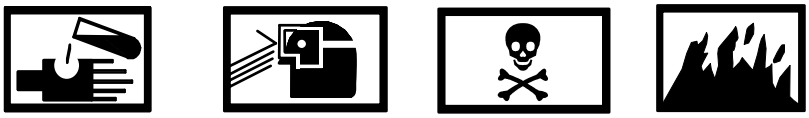
Place all four clamps on hose assembly before installing hose on other end of the splice.

28. Repeat steps 4-28 to splice the other hose assembly section to the hose splice.
29. Remove drip pans and dispose of contents per local procedures.
30. Clean up spill fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REPAIR 6 IN. SUCTION HOSE (TITAN BRAND)

WARNING



CHEMICAL EYE PROTECTION POISON FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

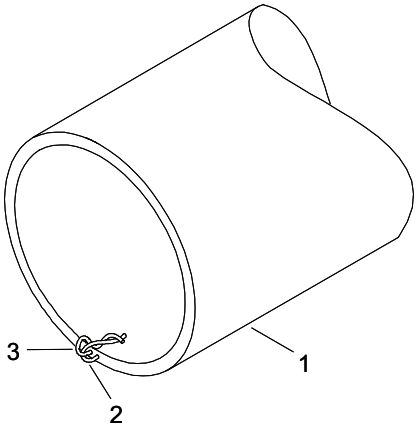


Figure 29. Hose Assembly Repair.

1. Place drip pan under hose assembly (Figure 29, Item 1) to be repaired.
2. Inspect hose assembly (Figure 29, Item 1) to identify the extent of damage to the hose assembly (Figure 29, Item 1).

WARNING

Metal wire coil may be sharp and/or jagged after hose is hack sawed apart. Take care to avoid personnel injury.

N

All cuts removed any damaged areas should be made perpendicular to the hose length.

3. Using a hacksaw, remove the damaged portion of the hose assembly (Figure 29, Item 1) by cutting the hose assembly (Figure 29, Item 1) on both sides of the damaged area. Discard damaged hose (Figure 29, Item 1).
4. Identify the metal wire coil (Figure 29, Item 2).
5. Using needle nose pliers, pull the metal wire coil (Figure 29, Item 2) approximately ½ in. out of the hose assembly (Figure 29, Item 1) so the metal wire coil (Figure 29, Item 2) is exposed.
6. Using needle nose pliers cut a piece of copper wire (Figure 29, Item 3) approximately 1-1/2 inches long.

REPAIR 6 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

7. Insert and center the piece of copper wire (Figure 29, Item 3) under the metal wire coil and into the hose assembly (Figure 29, Item 1) approximately ½ in. away from the end of the metal wire (Figure 29, Item 2), to ensure copper wire will not slide off.

N

If two ground wires exist, insert and wrap a piece of copper wire on both.

8. Using needle nose pliers, wrap the copper wire (Figure 29, Item 3) around the metal wire coil (Figure 29, Item 2) together, forming a pigtail.
9. Using needle nose pliers, carefully bend the copper wire (Figure 29, Item 2) inside the hose assembly (Figure 29, Item 1) so that it will contact the hose splice when assembled.

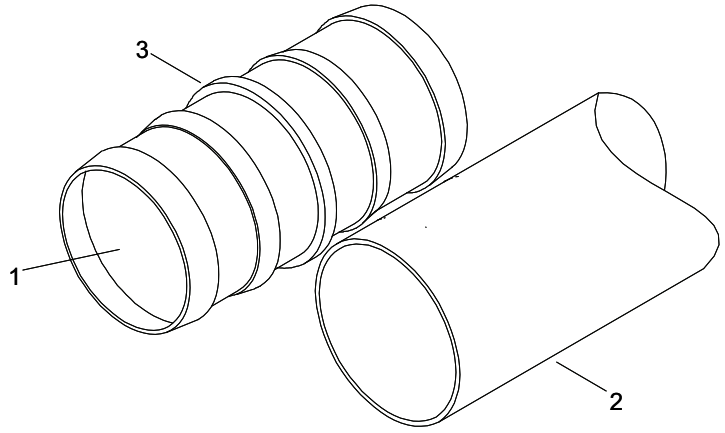


Figure 30. Hose Assembly Repair.

10. Remove segmented clamps and rubber gaskets from hose splice. These are not used with a suction hose repair.
11. Using the hose splice (Figure 30, Item 1) as a guide, align the cut end of one section of the hose assembly (Figure 30, Item 2) with the machined stop (Figure 30, Item 3) in the center of the hose splice (Figure 30, Item 1).
12. Using a marking pen, mark a line indicating the extent of splice insertion.

REPAIR 6 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

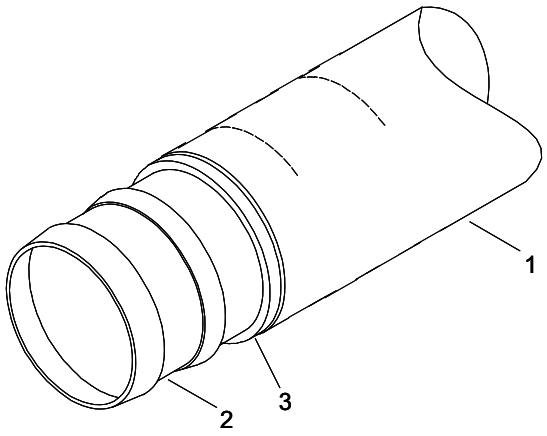


Figure 31. Hose Assembly Repair.

13. Install the hose assembly (Figure 31, Item 1) on the hose splice (Figure 31, Item 2) until it is flush with the machined stop (Figure 31, Item 3) in the center of the hose splice (Figure 31, Item 2).

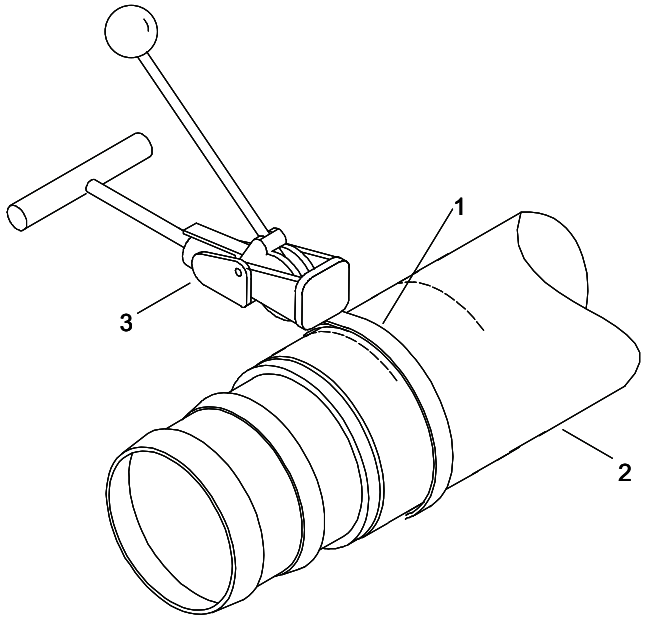


Figure 32. Hose Assembly Repair.

14. Position the first clamp (Figure 32, Item 1) on the hose assembly (Figure 32, Item 2) just aft the machined stop.

N

Ensure buckle is 30 degrees away from closest buckle.

REPAIR 4 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

15. Using clamping tool (Figure 32, Item 3), tighten the clamp (Figure 32, Item 1) until almost flush with the hose assembly (Figure 32, Item 2) surface.
16. Tighten clamp (Figure 32, Item 1) until the clamp (Figure 32, Item 1) cannot be tightened by hand any further.

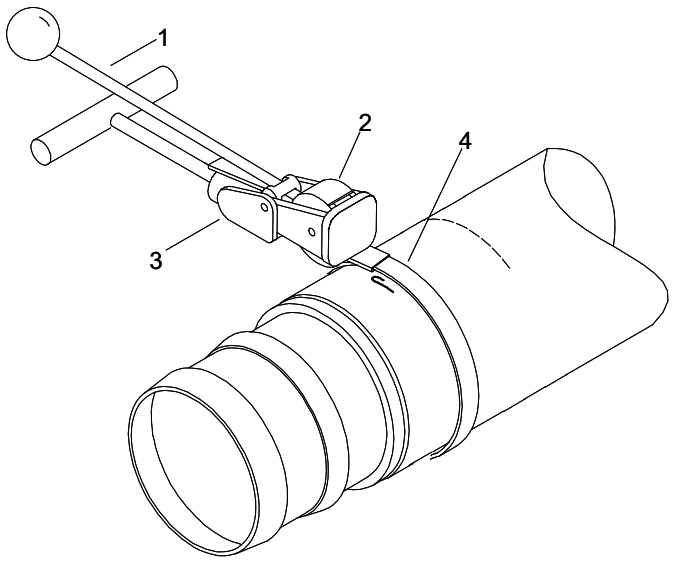


Figure 33. Hose Assembly Repair.

17. While holding the clamping tool handle (Figure 33, Item 1) in the down position, strike the center punch anvil (Figure 33, Item 2) three to four times with a hammer.
18. While holding the clamping tool handles (Figure 33, Item 1) together in the down position, raise and lower the entire clamping tool (Figure 33, Item 3) multiple times to shear the tail of the band off of the clamp (Figure 33, Item 4).
19. Using hammer, tap the edge of the distorted clamp (Figure 33, Item 4) down to a level configuration.

REPAIR 6 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

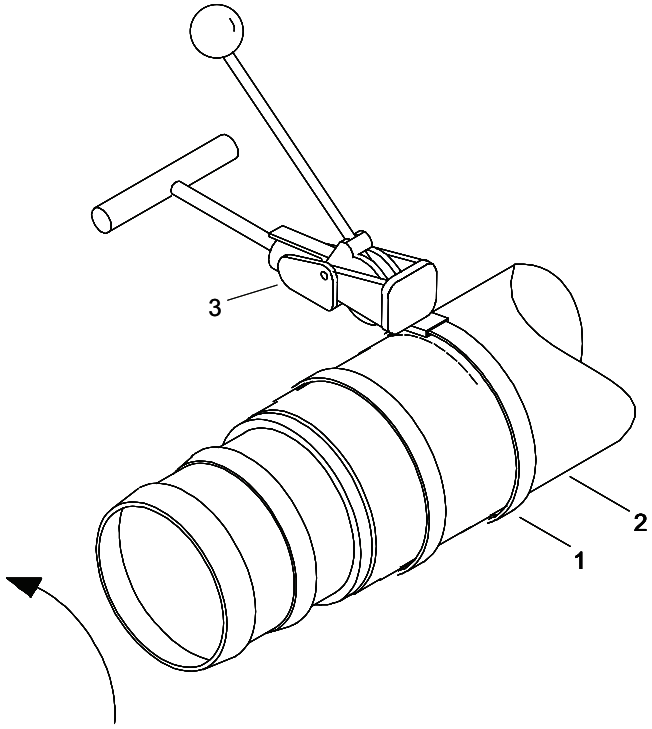


Figure 34. Hose Assembly Repair.

N

All clamps should be installed so that the clamp buckle is oriented a minimum of 30 degrees away from the previously installed clamp buckle.

20. Position the second clamp (Figure 34, Item 1) on the hose assembly (Figure 34, Item 2) until it is about ½ inch in from end of splice (or mark made in step 12).
21. Using clamping tool (Figure 34, Item 3), refer to steps 14-19 to install clamp (Figure 34, Item 1) on the hose assembly (Figure 34, Item 2) surface.

REPAIR 6 IN. SUCTION HOSE (TITAN BRAND) - CONTINUED

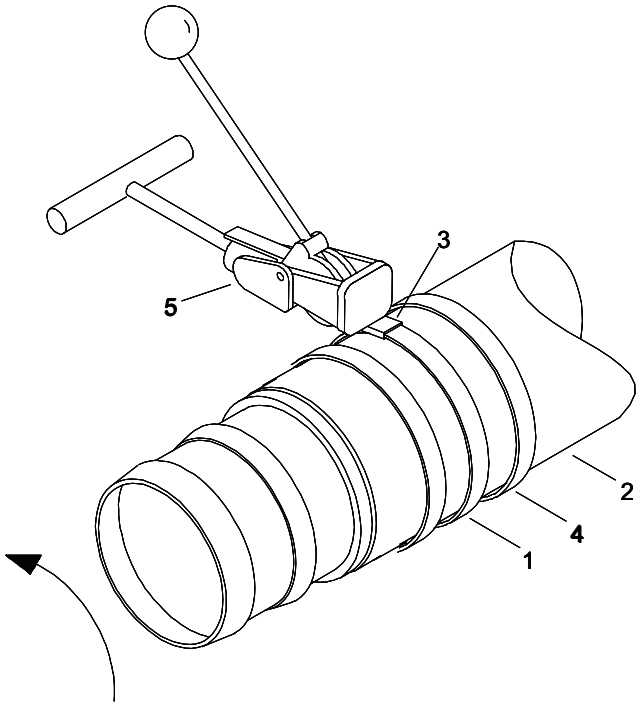


Figure 35. Hose Assembly Repair.

22. Position the third clamp (Figure 35, Item 1) on the hose assembly (Figure 35, Item 2) until it is centered between the two existing clamps.
23. Rotate the hose assembly (Figure 35, Item 2) until clamp buckle (Figure 35, Item 3) on the third clamp (Figure 35, Item 1) is oriented a minimum of 30 degrees away from the clamp buckle on the second clamp (Figure 35, Item 4).
24. Using clamping tool (Figure 35, Item 5), refer to steps 14–19 to install clamp (Figure 35, Item 1) on the hose assembly (Figure 35, Item 2) surface.

N

Place all three clamps on hose assembly before installing hose on other end of the splice.

25. Repeat steps 4-24 to splice the other hose assembly section to the hose splice.
26. Remove drip pans and dispose of contents per local procedures.
27. Clean up spill fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

DISASSEMBLE 4 IN. DISCHARGE HOSE (KIDDE BRAND), 3 IN./2 IN. DISCHARGE HOSE (DURODYNE BRAND), 4 IN. SUCTION HOSE (TITAN BRAND), 6 IN. DISCHARGE HOSE (KIDDE BRAND) AND 6 IN. SUCTION HOSE (TITAN BRAND) CAM-LOCK CONNECTOR

WARNING

CHEMICAL EYE PROTECTION FIRE

Fuel is toxic. Avoid prolonged or repeated breathing of vapors and contact with eyes or skin. Use only with adequate ventilation. Wear latex or rubber gloves and chemical splash goggles. First aid for ingestion: if swallowed do not induce vomiting. Drink two glasses of water or milk to dilute. Obtain medical attention. First aid for inhalation: if inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, use oxygen. Get medical attention. First aid for skin contact: remove contaminated clothing. Wash area with soap and water. Remove contaminated clothing, launder immediately and discard contaminated leather goods. If irritation persists, seek medical attention. First aid for eye contact: in case of contact, immediately flush eyes with plenty of water for at least 20 minutes, retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Serious harm (damage) may result if treatment is delayed. Continue to flush eyes while awaiting medical attention. Get medical attention and monitor the eye daily as advised by a physician.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. DISCHARGE HOSE (KIDDE BRAND), 3 IN./2 IN. DISCHARGE HOSE (DURODYNE BRAND), 4 IN. SUCTION HOSE (TITAN BRAND), 6 IN. DISCHARGE HOSE (KIDDE BRAND) AND 6 IN. SUCTION HOSE (TITAN BRAND) CAM-LOCK CONNECTOR - CONTINUED

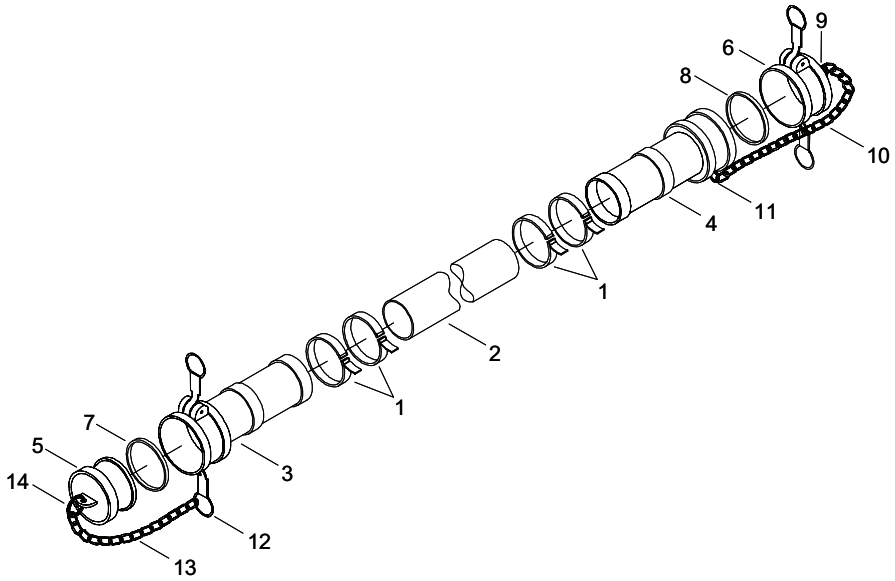


Figure 36. Suction Hose Assembly.

1. Remove split ring (Figure 36, Item 9) from quick disconnect dust cap (Figure 36, Item 6).
2. Remove split ring (Figure 36, Item 9) from chain (Figure 36, Item 10).
3. Remove split ring (Figure 36, Item 11) from male coupling half (Figure 36, Item 4).
4. Remove split ring (Figure 36, Item 11) from chain (Figure 36, Item 10).
5. Remove split ring (Figure 36, Item 12) from female coupling half (Figure 36, Item 3).
6. Remove split ring (Figure 36, Item 12) from chain (Figure 36, Item 13).
7. Remove split ring (Figure 36, Item 14) from quick disconnect dust plug (Figure 36, Item 5).
8. Remove split ring (Figure 36, Item 14) from chain (Figure 36, Item 13).
9. Cut and remove hose clamps (Figure 36, Item 1) from hose (Figure 36, Item 2) and discard hose clamp (Figure 36, Item 1).
10. Remove female coupling half (Figure 36, Item 3) and male coupling half (Figure 36, Item 4) from hose (Figure 36, Item 2).
11. Remove quick disconnect dust plug (Figure 36, Item 5) from female coupling half (Figure 36, Item 3).
12. Remove quick disconnect dust cap (Figure 36, Item 6) from male coupling half (Figure 36, Item 4).
13. Remove gaskets (Figure 36, Items 7 and 8) from female coupling half (Figure 36, Item 3) and quick disconnect dust cap (Figure 36, Item 6).
14. Discard gaskets (Figure 36, Item 7, 8).

END OF TASK

CLEAN HOSE ASSEMBLY AND FITTINGS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth or a medium bristle brush and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT HOSE ASSEMBLY AND FITTINGS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect rubber hose for tears, cuts, holes or deterioration. If found, replace with a serviceable like item.

END OF TASK

ASSEMBLE HOSE ASSEMBLY

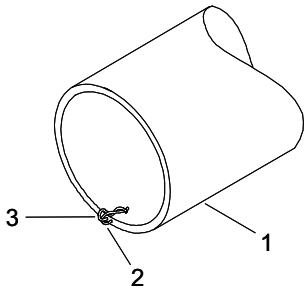


Figure 37. Hose Assembly Repair.

1. Obtain the correct length of replacement hose (Figure 37, Item 1).
2. Identify the ground wire (Figure 37, Item 2) in each end of the hose (Figure 37, Item 1).
3. Using needle nose pliers, pull the ground wire (Figure 37, Item 2) approximately ½ in. out of the hose (Figure 37, Item 1) so the ground wire (Figure 37, Item 2) is loose.
4. Using needle nose pliers, cut a piece of copper wire (Figure 37, Item 3) approximately 1½ inches long.

ASSEMBLE HOSE ASSEMBLY-CONTINUED

5. Insert the piece of copper wire (Figure 37, Item 3) into the hose (Figure 37, Item 1) approximately ½ in. away from the ground wire (Figure 37, Item 2).

N

If two ground wires exist, insert and wrap a piece of copper wire on both.

6. Using needle nose pliers, wrap the copper wire (Figure 37, Item 3) and ground wire (Figure 37, Item 2) together, forming a pigtail.
7. Using needle nose pliers, carefully bend the ground wire (Figure 37, Item 2) inside the hose (Figure 37, Item 1).

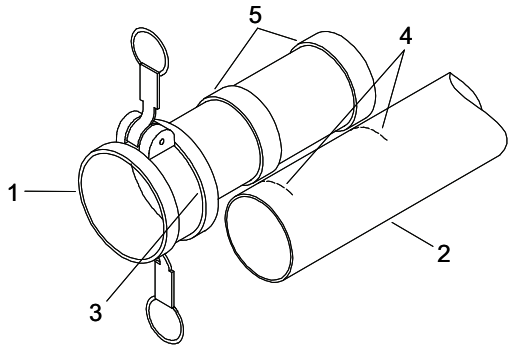


Figure 38. Suction Hose Assembly Repair.

N

The ground wires must be exposed at the other end of the hose in the same manner before proceeding to the next step.

8. Using the male or female coupling half (Figure 38, Item 1) as a guide, align the cut end of one section of hose (Figure 38, Item 2) with the machined stop (Figure 38, Item 3) of the male or female coupling half (Figure 38, Item 1).
9. Using a marking pen, mark two lines (Figure 38, Item 4) on the hose (Figure 38, Item 2) where the hose barbs (Figure 38, Item 5) will be located.

ASSEMBLE HOSE ASSEMBLY-CONTINUED

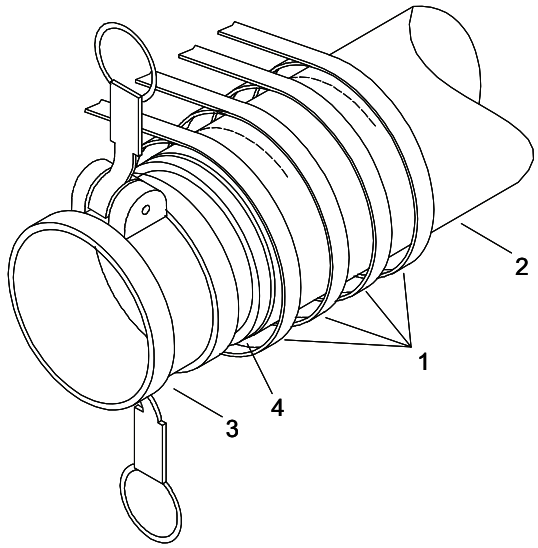


Figure 39. Suction Hose Assembly Repair.

N

The four clamps are to be positioned so that there is one clamp on either side of the two barbs. There should be a gap of 1/8-1/4 in. between the two middle clamps.

10. Place four clamps (Figure 39, Item 1) loosely on the hose assembly (Figure 39, Item 2).
11. Install female coupling half or male coupling half (Figure 39, Item 3) into hose assembly (Figure 39, Item 2) until it is flush with the machined stop (Figure 39, Item 4).

N

Contact Field Maintenance to perform continuity test between male and female coupling assemblies

ASSEMBLE HOSE ASSEMBLY-CONTINUED

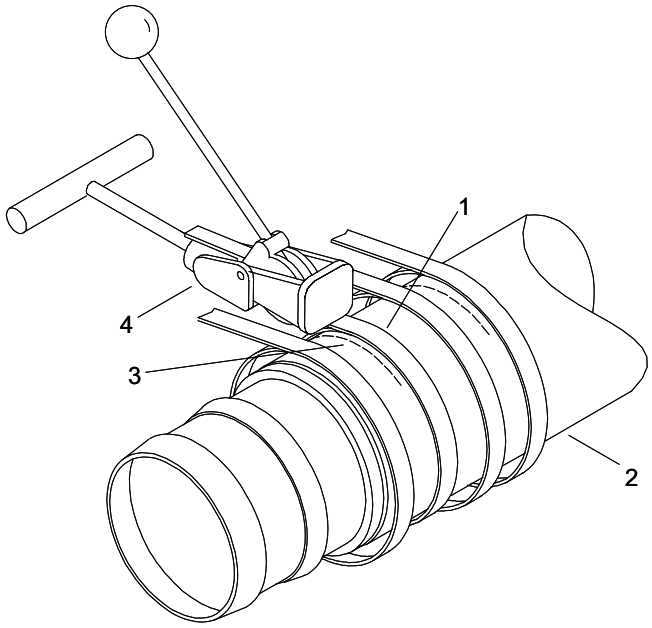


Figure 40. Suction Hose Assembly Repair.

N

All clamps should be installed so that the clamp buckle is oriented a minimum of 30 degrees away from the previously installed clamp buckle.

12. Position the first clamp (Figure 40, Item 1) on the hose assembly (Figure 40, Item 2) until it is aligned with first mark (Figure 40, Item 3) previously made on the hose assembly (Figure 40 Item 2).
13. Using clamping tool (Figure 40, Item 4) from hose repair kit, tighten the clamp (Figure 40, Item 1) until almost flush with the hose assembly (Figure 40, Item 2) surface.

ASSEMBLE HOSE ASSEMBLY-CONTINUED

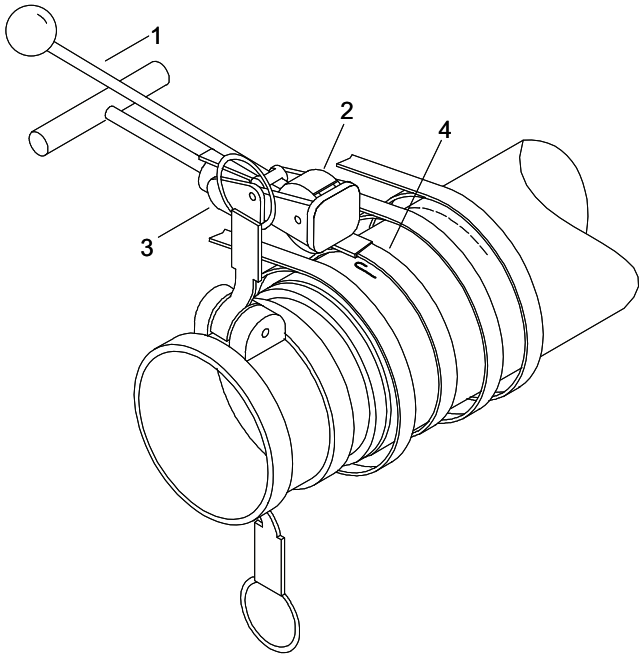


Figure 41. Hose Assembly Repair.

14. While holding the clamping tool handle (Figure 41, Item 1) in the down position, strike the center punch anvil (Figure 41, Item 2) three to four times with a hammer.
15. While still holding the clamping tool handle (Figure 41, Item 1) in the down position, raise the entire clamping tool (Figure 41, Item 3) up and down several times to shear the tail of the band off of the clamp (Figure 41, Item 4).
16. Using hammer, tap the edge of the distorted clamp (Figure 41, Item 4) down to a level configuration.
17. Perform steps 12 through 16 to install the remaining three clamps and coupling at opposite end of hose.
18. Install new gaskets (Figure 36, Items 7 and 8) into quick disconnect dust cap (Figure 36, Item 6) and female coupling half (Figure 36, Item 3).
19. Install quick disconnect dust cap (Figure 36, Item 6) onto male coupling half (Figure 36, Item 4).
20. Install quick disconnect dust plug (Figure 36, Item 5) into female coupling half (Figure 36, Item 3).
21. Install split ring (Figure 36, Item 14) on quick disconnect dust plug (Figure 36, Item 5).
22. Install split ring (Figure 36, Item 14) on chain (Figure 36, Item 13).
23. Install split ring (Figure 36, Item 12) on chain (Figure 36, Item 13).
24. Install split ring (Figure 36, Item 12) on female coupling half (Figure 36, Item 3).
25. Install split ring (Figure 36, Item 11) on chain (Figure 36, Item 10).
26. Install split ring (Figure 36, Item 11) on male coupling half (Figure 36, Item 4).
27. Install split ring (Figure 36, Item 9) on chain (Figure 36, Item 10).
28. Install split ring (Figure 36, Item 9) on quick disconnect dust cap (Figure 36, Item 6).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FUEL SYSTEM COMPONENTS
REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools
Fuel spill control kit (WP 0163, Item 24)
Pan, drip (WP 0165, Item 24)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Evacuation kit assembly (WP 0163, Item 19)

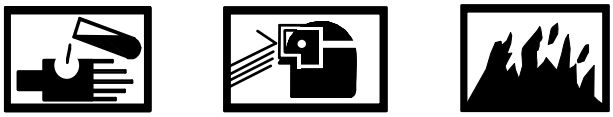
Personnel Required
Petroleum Supply Specialist 92F

Materials/Parts
Apron, utility (WP 0165, Item 2)

Equipment Condition
FSSP assembly shut down

REMOVE FUEL SYSTEM COMPONENTS WITH CAMLOCK CONNECTORS

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

- A hose clamp may be used on discharge hoses to reduce excess fuel spill. Hose clamp is found in the evacuation kit.
- Procedure typical for components with camlock connectors, male or female. On male end components, camlock levers are found on the hose assembly.

REMOVE FUEL SYSTEM COMPONENTS WITH CAMLOCK CONNECTORS - CONTINUED

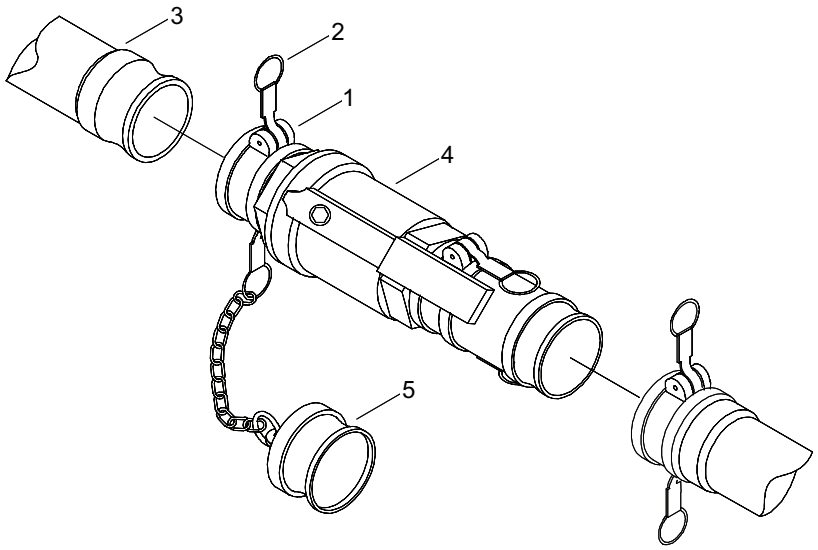


Figure 1. Fuel System Component with Camlock Connectors.

1. Place drip pans under coupling halves (Figure 1, Item 1) to be disconnected.
2. Pull out on coupling half camlock levers (Figure 1, Item 2) to detach hose assembly (Figure 1, Item 3) from coupling half (Figure 1, Item 1).
3. Remove component (Figure 1, Item 4).
4. Install dust plugs (Figure 1, Item 5) in coupling halves (Figure 1, Item 1).

END OF TASK

INSTALL FUEL SYSTEM COMPONENTS WITH CAMLOCK CONNECTORS

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

INSTALL FUEL SYSTEM COMPONENTS WITH CAMLOCK CONNECTORS – CONTINUED

1. Remove dust plugs (Figure 1, Item 5) from female coupling halves (Figure 1, Item 1).
2. Insert hose assembly (Figure 1, Item 3) into female coupling half (Figure 1, Item 1).
3. Push in on coupling half camlock levers (Figure 1, Item 2) to secure hose assembly (Figure 1, Item 3) into female coupling half (Figure 1, Item 1).
4. Remove drip pans and dispose of contents per local procedures.
5. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REMOVE FUEL SYSTEM COMPONENTS WITH NON-VALVED QUICK DISCONNECT COUPLING HALF

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

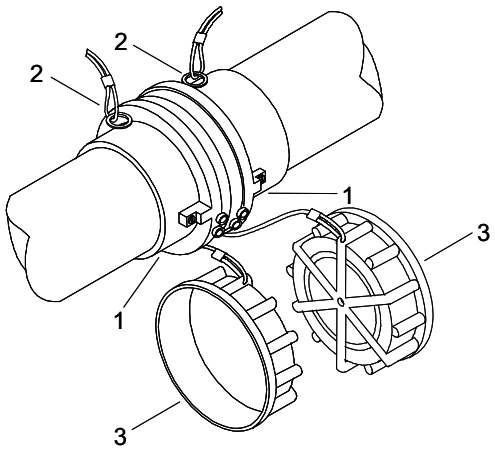


Figure 2. Fuel System Component With Non-Valved Quick Disconnect Coupling Half.

1. Place drip pans under quick disconnect coupling halves (Figure 2, Item 1) to be disconnected.
2. Pull rings (Figure 2, Item 2) while rotating the quick disconnect coupling half (Figure 2, Item 1) counterclockwise.
3. Detach quick disconnect coupling halves (Figure 2, Item 1).
4. Install dust caps (Figure 2, Item 3) on quick disconnect coupling halves (Figure 2, Item 1).

END OF TASK

INSTALL FUEL SYSTEM COMPONENTS WITH NON-VALVED QUICK DISCONNECT COUPLING HALF

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

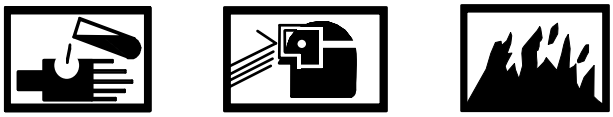
When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

1. Remove dust caps (Figure 2, Item 3) from quick disconnect coupling halves (Figure 2, Item 1).
2. Place quick disconnect coupling halves (Figure 2, Item 1) together and align quick disconnect coupling halves (Figure 2, Item 1).
3. Rotate one quick disconnect coupling half (Figure 2, Item 1) clockwise to connect quick disconnect coupling halves (Figure 2, Item 1).
4. Remove drip pans and dispose of contents per local procedures.
5. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REMOVE FUEL SYSTEM COMPONENTS WITH VALVED QUICK DISCONNECT COUPLING HALF

WARNING



CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

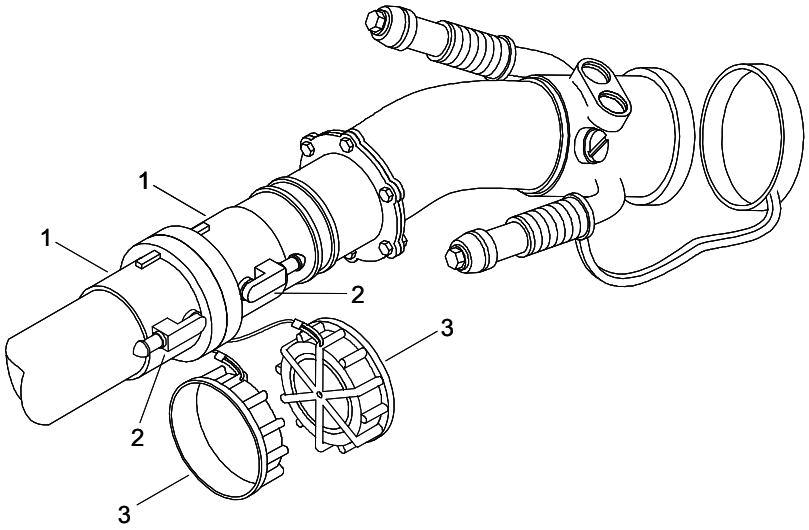


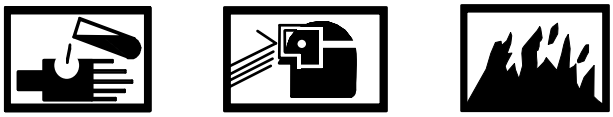
Figure 3. Fuel System Component With Valved Quick Disconnect Coupling Half.

1. Place drip pans under quick disconnect coupling halves (Figure 3, Item 1) to be disconnected.
2. Position shutoff valves (Figure 3, Item 2) in the closed position.
3. Rotate the quick disconnect coupling half (Figure 3, Item 1) counterclockwise.
4. Detach quick disconnect coupling half (Figure 3, Item 1).
5. Install dust caps (Figure 3, Item 3) on quick disconnect coupling halves (Figure 3, Item 1).

END OF TASK

INSTALL FUEL SYSTEM COMPONENTS WITH VALVED QUICK DISCONNECT COUPLING HALF

WARNING



CHEMICAL EYE PROTECTION FIRE

1. Remove dust caps (Figure 3, Item 3) from quick disconnect coupling halves (Figure 3, Item 1).
2. Place quick disconnect coupling halves (Figure 3, Item 1) together and align quick disconnect coupling halves (Figure 3, Item 1).
3. Rotate one quick disconnect coupling half (Figure 3, Item 1) clockwise to connect quick disconnect coupling halves (Figure 3, Item 1).
4. Position shutoff valves (Figure 3, Item 2) in the open position.
5. Remove drip pans and dispose of contents per local procedures.
6. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FUEL SYSTEM COUPLING AND DUST CAP GASKETS REPLACEMENT

INITIAL SETUP:

Tools

Fuel spill control kit (WP 0163, Item 24)
Pan, drip (WP 0163, Item 24)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Evacuation kit assembly (WP 0163, Item 19)
Hose repair kit (WP 0163, Item 30)

Personnel Required

Petroleum Supply Specialist 92F

Materials/Parts

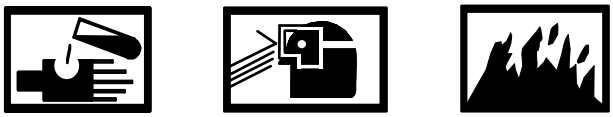
Cloth, cleaning (WP 0165, Item 5)

Equipment Condition

FSSP Assembly shut down.

REPLACE GASKETS IN CAMLOCK COUPLINGS

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

REPLACE GASKETS IN CAMLOCK COUPLINGS - CONTINUED

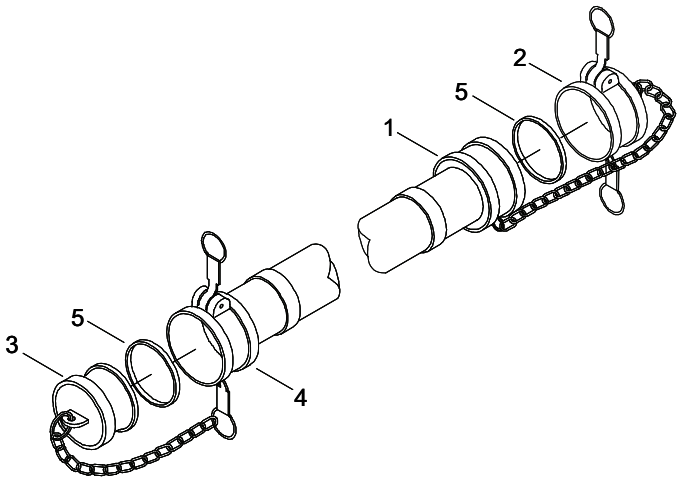
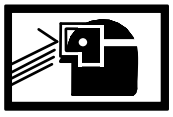


Figure 1. Quick Disconnect Couplings.

1. Place drip pans under coupling half (Figure 1, Item 1 and Figure 1, Item 4).
2. Remove dust cap (Figure 1, Item 2) and dust plug (Figure 1, Item 3).
3. Remove gasket from dust cap (Figure 1, Item 2) and coupling (Figure 1, Item 4).
4. Discard defective gaskets (Figure 1, Item 5).
5. Remove drip pan and dispose of contents per local procedures.

WARNING



EYE PROTECTION

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife

6. Clean coupling half.
   a. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
   b. Clean all metallic parts with a cleaning cloth.
7. Inspect coupling half.
   a. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
   b. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like item.
8. Install new gasket (Figure 1, Item 5) in dust cap (Figure 1, Item 2) or coupling half (Figure 1, Item 4).
9. Install dust cap (Figure 1, Item 2) on coupling half (Figure 1, Item 1).
10. Install dust plug (Figure 1, Item 3) in coupling half (Figure 1, Item 4).

REPLACE GASKETS IN CAMLOCK COUPLINGS - CONTINUED

11. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REPLACE GASKET IN NON-VALVED UNISEX COUPLING

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

- Use hose clamps from evacuation kit to prevent fuel spill, when replacing gaskets in a discharge hose line with fuel in it.
- Hold coupling half in inverted position while disconnecting to avoid spilling excess fuel.

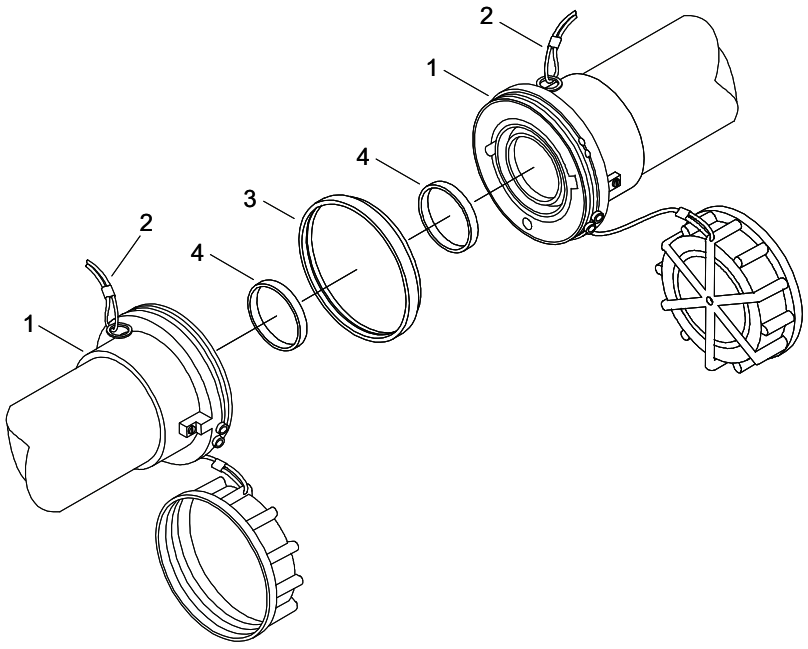


Figure 2. Fuel System With Non-Valved Unisex Coupling Halves.

1. Place drip pans under unisex coupling halves (Figure 2, Item 1) to be disconnected.

REPLACE GASKET IN NON-VALVED UNISEX COUPLING - CONTINUED

2. Pull rings (Figure 2, Item 2) while rotating one unisex coupling half (Figure 2, Item 1) counterclockwise.
   a. Disconnect unisex coupling halves (Figure 2, Item 1).
   b. Remove bumper (Figure 2, Item 3).
   c. Remove and discard defective gaskets (Figure 2, Item 4).
3. Remove drip pan and dispose of contents per local procedures.
4. Clean coupling half.

WARNING

EYE PROTECTION

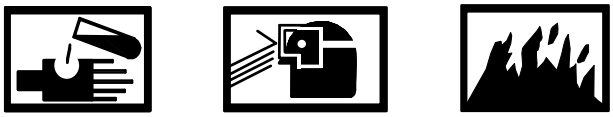
If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife

   a. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
   b. Clean all metallic parts with a cleaning cloth.
5. Inspect coupling half.
   a. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
   b. Inspect all wire cables for cracks, frays, distortion and corrosion. If cracks, frays, distortion or corrosion is found, replace with a serviceable like item.
6. Install gasket in coupling half.
   a. Install new gaskets (Figure 2, Item 4) on coupling half (Figure 2, Item 1).
   b. Install bumper (Figure 2, Item 3).
   c. Align unisex coupling halves (Figure 2, Item 1) together.
   d. Rotate the one unisex coupling half (Figure 2, Item 1) clockwise to connect unisex coupling halves (Figure 2, Item 1).
   e. Ensure unisex coupling halves (Figure 2, Item 1) are securely connected.
7. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

REPLACE GASKET IN VALVED QUICK DISCONNECT COUPLING HALF

WARNING



CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

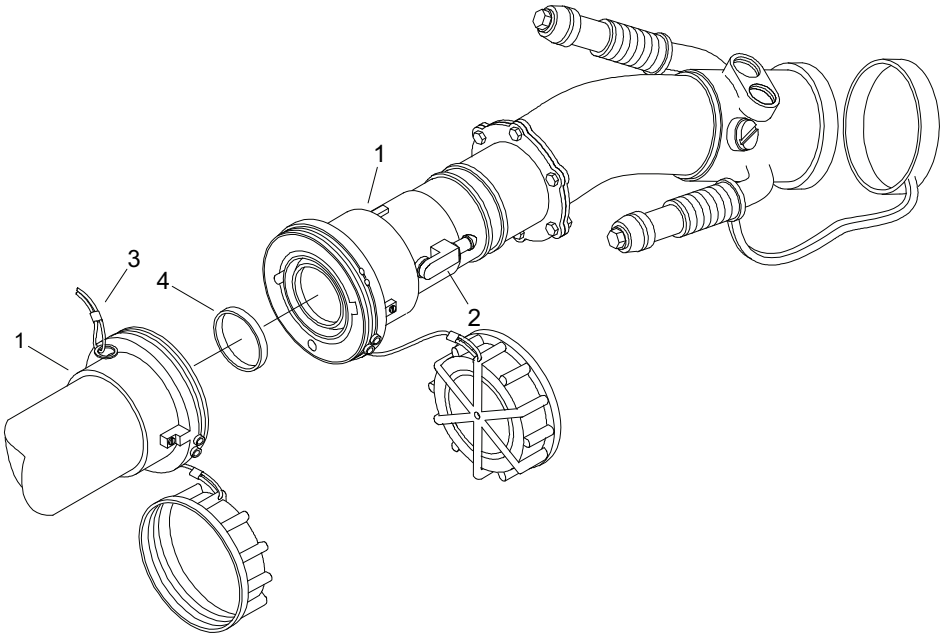
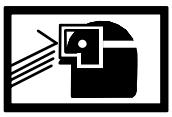


Figure 3. Fuel System Coupling With Valved Unisex Coupling Half.

1. Place drip pan under valved quick disconnects coupling halves (Figure 3, Item 1) to be disconnected.
2. Position shutoff valves (Figure 3, Item 2) in the closed position.
3. Pull ring (Figure 3, Item 3) while rotating one unisex coupling half (Figure 3, Item 1) counterclockwise.
   a. Disconnect unisex coupling half (Figure 3, Item 1).
   b. Remove and discard defective gaskets (Figure 3, Item 4).
4. Remove drip pans and dispose of contents per local procedures.
5. Clean quick disconnect coupling half.

REPLACE GASKET IN VALVED QUICK DISCONNECT COUPLING HALF - CONTINUED

WARNING



EYE PROTECTION

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

a. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.

b. Clean all metallic parts with a cleaning cloth.

4. Inspect valved quick disconnect coupling half.

a. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.

b. Inspect all wire cables for cracks, frays, distortion and corrosion. If cracks, frays, distortion or corrosion is found, replace with a serviceable like item.

5. Install gasket (Figure 3, Item 4) in quick disconnect coupling half (Figure 3, Item 1).

a. Install new gasket (Figure 3, Item 4) on quick disconnect coupling half (Figure 3, Item 1).

b. Align quick disconnect coupling half (Figure 3, Item 1) together.

c. Rotate one quick disconnect coupling half (Figure 3, Item 1) clockwise to connect quick disconnect coupling halves (Figure 3, Item 1).

d. Ensure quick disconnect coupling halves (Figure 3, Item 1) are securely connected.

e. Position shutoff valve (Figure 3, Item 2) in the open position.

6. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, DOUBLE FEMALE 3 IN.
PART NUMBER 60273030SG
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2), (WP 0166, Item 37)

Personnel Required

Petroleum Supply Specialist 92F

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 3 IN. DOUBLE FEMALE ADAPTER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 3 IN. DOUBLE FEMALE ADAPTER ASSEMBLY - CONTINUED

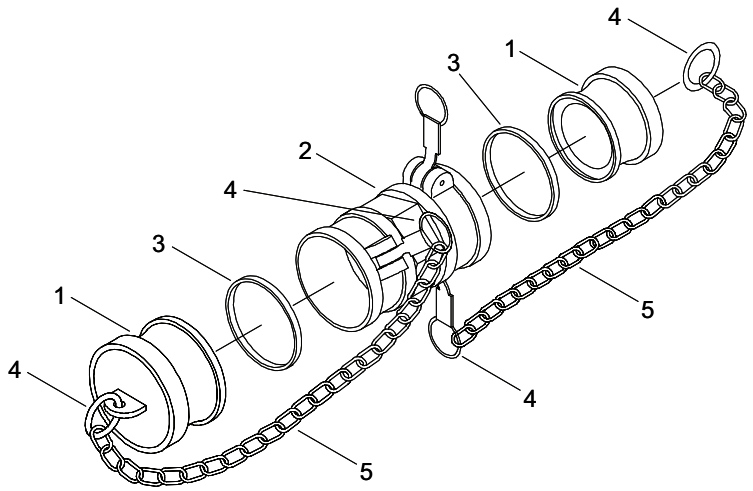


Figure 1. 3 In. Double Female Adapter Assembly

1. Remove dust plugs (Figure 1, Item 1) from ends of double female adapter assembly (Figure 1, Item 2).
2. Remove gaskets (Figure 1, Item 3) from double female adapter assembly (Figure 1, Item 2).
3. Discard gaskets (Figure 1, Item 3).
4. Remove split rings (Figure 1, Item 4) from dust plugs (Figure 1, Item 1) and double female adapter assembly (Figure 1, Item 2).
5. Remove split rings (Figure 1, Item 4) from chains (Figure 1, Item 5).

END OF TASK

CLEAN 3 IN. DOUBLE FEMALE ADAPTER ASSEMBLY COMPONENTS

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 3 IN. DOUBLE FEMALE ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 3 IN. DOUBLE FEMALE ADAPTER ASSEMBLY

1. Install split rings (Figure 1, Item 4) on chains (Figure 1, Item 5).
2. Install split rings (Figure 1, Item 4) on dust plugs (Figure 1, Item 1) and double female adapter assembly (Figure 1, Item 2).
3. Install new gaskets (Figure 1, Item 3) into double female adapter assembly (Figure 1, Item 2).
4. Install dust plugs (Figure 1, Item 1) into double female adapter assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, DOUBLE MALE 3 IN.
PART NUMBER 602830301
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2), (WP 0165, Item 37)

Personnel Required

Petroleum Supply Specialist 92F

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 3 IN. DOUBLE MALE ADAPTER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 3 IN. DOUBLE MALE ADAPTER ASSEMBLY - CONTINUED

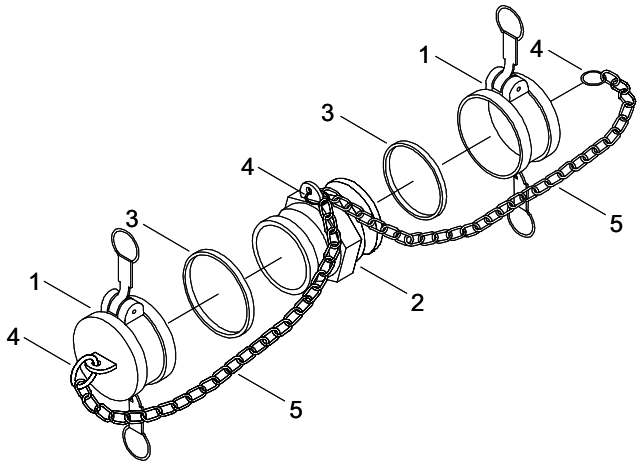


Figure 1. 3 In. Double Male Adapter Assembly

1. Remove dust caps (Figure 1, Item 1) from ends of double male adapter assembly (Figure 1, Item 2).
2. Remove gaskets (Figure 1, Item 3) from dust caps (Figure 1, Item 1).
3. Discard gaskets (Figure 1, Item 3).
4. Remove split rings (Figure 1, Item 4) from dust caps (Figure 1, Item 1) and 3 in. double male adapter assembly (Figure 1, Item 2).
5. Remove split rings (Figure 1, Item 4) from chains (Figure 1, Item 5).

END OF TASK

CLEAN 3 IN. DOUBLE MALE ADAPTER ASSEMBLY COMPONENTS

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 3 IN. DOUBLE MALE ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 3 IN. DOUBLE MALE ADAPTER ASSEMBLY

1. Install split rings (Figure 1, Item 4) on chains (Figure 1, Item 5).
2. Install split rings (Figure 1, Item 4) on dust caps (Figure 1, Item 1) and double male adapter assembly (Figure 1, Item 2).
3. Install new gaskets (Figure 1, Item 3) into dust caps (Figure 1, Item 1).
4. Install dust caps (Figure 1, Item 1) on 3 in. double male adapter assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, DOUBLE FEMALE 4 IN.
PART NUMBER 602740401
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (WP 0166, Item 4)

Personnel Required

Petroleum Supply Specialist 92F

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. DOUBLE FEMALE ADAPTER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. DOUBLE FEMALE ADAPTER ASSEMBLY - CONTINUED

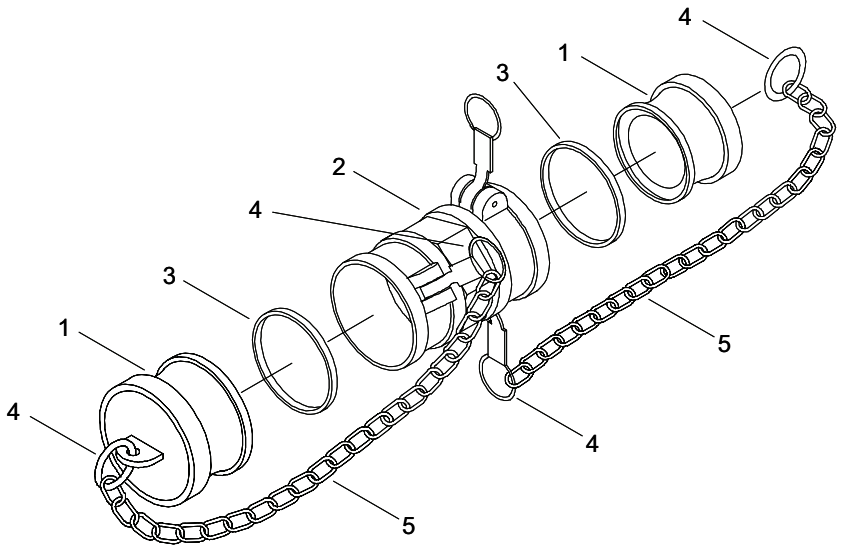


Figure 1. 4 In. Double Female Adapter Assembly

1. Remove dust plugs (Figure 1, Item 1) from ends of double female adapter assembly (Figure 1, Item 2).
2. Remove gaskets (Figure 1, Item 3) from double female adapter assembly (Figure 1, Item 2).
3. Discard gaskets (Figure 1, Item 3).
4. Remove split rings (Figure 1, Item 4) from dust plugs (Figure 1, Item 1) and double female adapter assembly (Figure 1, Item 2).
5. Remove split rings (Figure 1, Item 4) from chains (Figure 1, Item 5).

END OF TASK

CLEAN 4 IN. DOUBLE FEMALE ADAPTER ASSEMBLY COMPONENTS

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. DOUBLE FEMALE ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. DOUBLE FEMALE ADAPTER ASSEMBLY

1. Install split rings (Figure 1, Item 4) on chains (Figure 1, Item 5).
2. Install split rings (Figure 1, Item 4) on dust plugs (Figure 1, Item 1) and double female adapter assembly (Figure 1, Item 2).
3. Install new gaskets (Figure 1, Item 3) into double female adapter assembly (Figure 1, Item 2).
4. Install dust plugs (Figure 1, Item 1) into double female adapter assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, DOUBLE MALE 4 IN.
PART NUMBER 602840401
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2), (WP 0166, Item 37)

Personnel Required

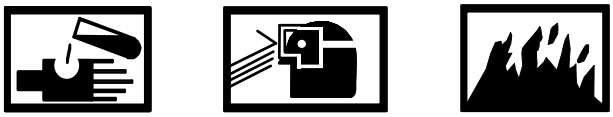
Petroleum Supply Specialist 92F

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. DOUBLE MALE ADAPTER ASSEMBLY (CAMLOCK CONNECTOR)

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. DOUBLE MALE ADAPTER ASSEMBLY (CAMLOCK CONNECTOR) - CONTINUED

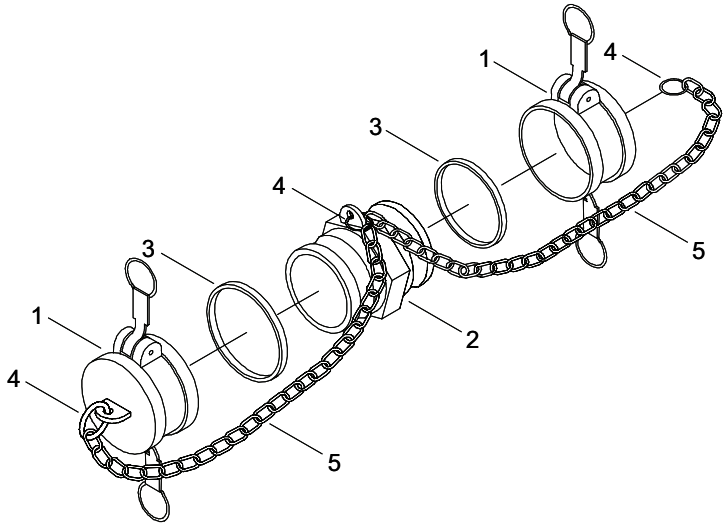


Figure 1. 4 In. Double Male Adapter Assembly.

1. Remove dust caps (Figure 1, Item 1) from adapter assembly (Figure 1, Item 2).
2. Remove gaskets (Figure 1, Item 3) from dust caps (Figure 1, Item 1).
3. Discard gaskets (Figure 1, Item 3).
4. Remove split rings (Figure 1, Item 4) from dust caps (Figure 1, Item 1) and adapter assembly (Figure 1, Item 2).
5. Remove split rings (Figure 1, Item 4) from chains (Figure 1, Item 5).

END OF TASK

CLEAN 4 IN. DOUBLE MALE ADAPTER ASSEMBLY COMPONENTS

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. DOUBLE MALE ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect dust caps and split rings for cracks or corrosion. If cracks or corrosion are found, replace with a serviceable like item.

EN D OF TASK

ASSEMBLE 4 IN. DOUBLE MALE ADAPTER ASSEMBLY

1. Install split rings (Figure 1, Item 4) on chains (Figure 1, Item 5).
2. Install split rings (Figure 1, Item 4) on dust caps (Figure 1, Item 1) and adapter assembly (Figure 1, Item 2).
3. Install new gaskets (Figure 1, Item 3) in dust caps (Figure 1, Item 1).
4. Install dust caps (Figure 1, Item 1) on adapter assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X MALE 6 IN.
PART NUMBER 435BA-4060-AC
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (WP 0166, Item 37)
Gasket (WP 0166, Item 38)

Personnel Required

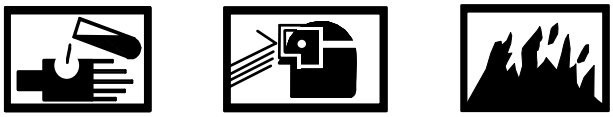
Petroleum Supply Specialist 92F

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. FEMALE X 6 IN. MALE ADAPTER ASSEMBLY (CAM-LOCK CONNECTOR)

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. FEMALE X 6 IN. MALE ADAPTER ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

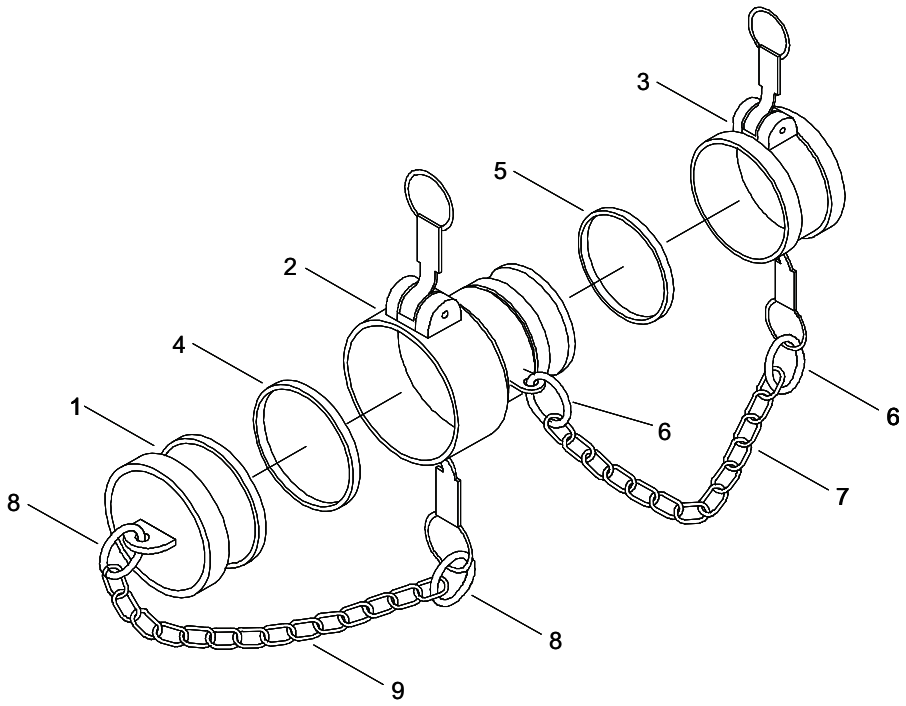


Figure 1. 4 In. Female X 6 In. Male Adapter Assembly.

1. Remove 4 in. dust plug (Figure 1, Item 1) from adapter assembly (Figure 1, Item 2).
2. Remove 6 in. dust cap (Figure 1, Item 3) from adapter assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from adapter assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 6 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove rings (Figure 1, Item 6) on 6 in. dust cap (Figure 1, Item 3) and adapter assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Items 8) on 4 in. dust plug (Figure 1, Item 1) and on the adapter assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Items 8) on chain (Figure 1, Item 9).

END OF TASK

CLEAN 4 IN. FEMALE X 6 IN. MALE ADAPTER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. FEMALE X 6 IN. MALE ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. FEMALE X 6 IN. MALE ADAPTER ASSEMBLY

1. Install split rings (Figure 1, Items 6) on chain (Figure 1, Items 7).
2. Install split rings (Figure 1, Item 6) on 6 in. dust cap (Figure 1, Item 3) and adapter assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
4. Install split rings (Figure 1, Item 8) on 4 in. dust plug (Figure 1, Item 1) and on the adapter assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 6 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into adapter assembly (Figure 1, Item 2).
7. Install 6 in. dust cap (Figure 1, Item 3) on adapter assembly (Figure 1, Item 2).
8. Install 4 in. dust plug (Figure 1, Item 1) in adapter assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 2 IN. X MALE 1.5 IN.
PART NUMBER 602620151
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (WP 0166, Item 37)
Gasket (WP 0166, Item 38)

Personnel Required

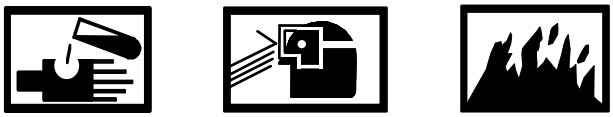
Petroleum Supply Specialist 92F

Equipment Condition

Reducer assembly removed from FSSP (WP 0109).

DISASSEMBLE 2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY - CONTINUED

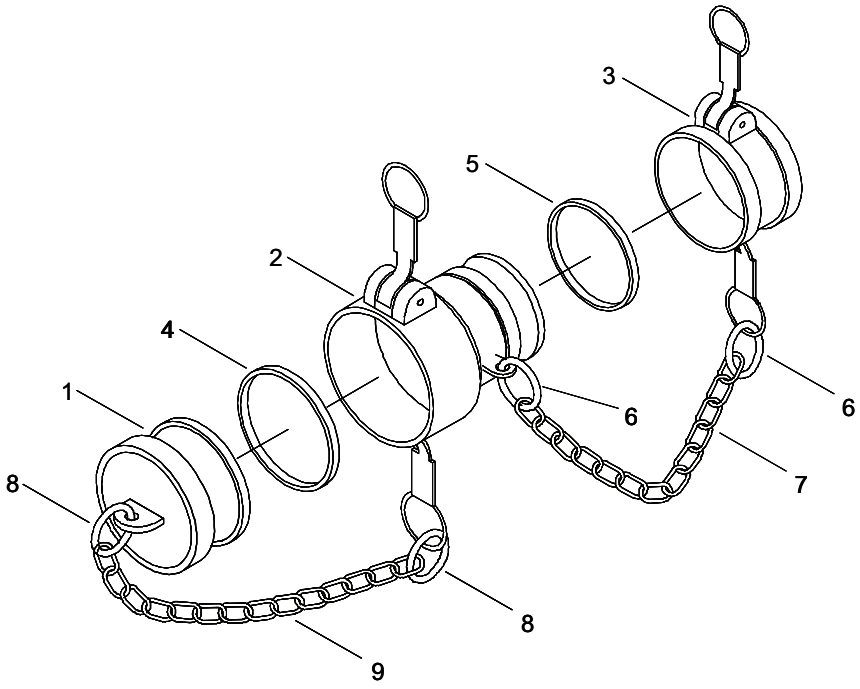


Figure 1. 2 In. Female X 1.5 In. Male Reducer Assembly.

1. Remove 2 in. dust plug (Figure 1, Item 1) from reducer assembly (Figure 1, Item 2).
2. Remove 1.5 in. dust cap (Figure 1, Item 3) from reducer assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from reducer assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 1.5 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove rings (Figure 1, Item 6) on 1.5 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Item 8) on 2 in. dust plug (Figure 1, Item 1) and on the reducer assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).

END OF TASK

CLEAN 2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY

1. Install split rings (Figure 1, Item 6) on chain (Figure 1, Items 7).
2. Install split rings (Figure 1, Item 6) on 1.5 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
4. Install split rings (Figure 1, Item 8) on 2 in. dust plug (Figure 1, Item 1) and on the reducer assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 1.5 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into reducer assembly (Figure 1, Item 2).
7. Install 1.5 in. dust cap (Figure 1, Item 3) on reducer assembly (Figure 1, Item 2).
8. Install 2 in. dust plug (Figure 1, Item 1) in reducer assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 2 IN.
PART NUMBER 602640201
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (WP 0166, Item 37)
Gasket (WP 0166, Item 38)

Personnel Required

Petroleum Supply Specialist 92F

Equipment Condition

Reducer assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY (CAMLOCK CONNECTOR)

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY (CAMLOCK CONNECTOR) - CONTINUED

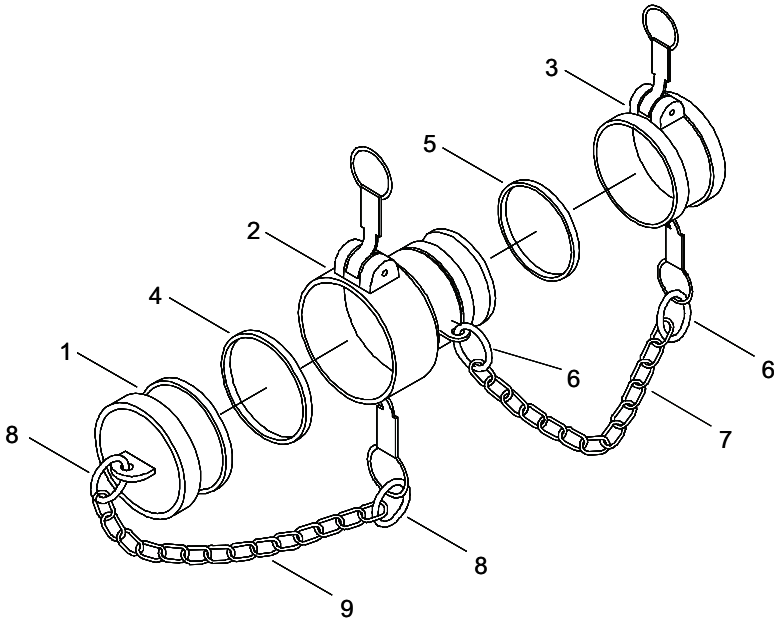


Figure 1. 4 In. Female X 2 In. Male Reducer Assembly.

1. Remove 4 in. dust plug (Figure 1, Item 1) from reducer assembly (Figure 1, Item 2).
2. Remove 2 in. dust cap (Figure 1, Item 3) from reducer assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from reducer assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 2 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove rings (Figure 1, Item 6) on 2 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Item 8) on 4 in. dust plug (Figure 1, Item 1) and on the reducer assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).

END OF TASK

CLEAN 4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY

1. Install split rings (Figure 1, Item 6) on chain (Figure 1, Items 7).
2. Install split rings (Figure 1, Item 6) on 2 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
4. Install split rings (Figure 1, Item 8) on 4 in. dust plug (Figure 1, Item 1) and on the reducer assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 2 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into reducer assembly (Figure 1, Item 2).
7. Install 2 in. dust cap (Figure 1, Item 3) on reducer assembly (Figure 1, Item 2).
8. Install 4 in. dust plug (Figure 1, Item 1) in reducer assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, FEMALE 4 IN. X MALE 3 IN.
PART NUMBER 602640301
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Personnel Required

Petroleum Supply Specialist 92F

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 4)
Gasket (WP 0166, Item 37)
Gasket (WP 0166, Item 38)

Equipment Condition

Reducer assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY - CONTINUED

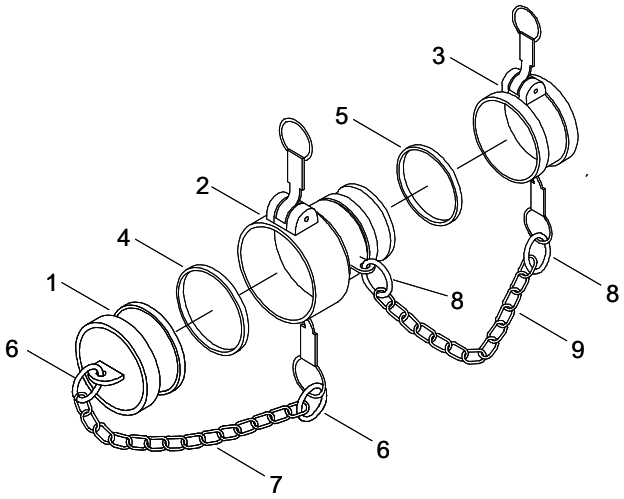


Figure 1. 4 In. Female X 3 In. Male Reducer Assembly.

1. Remove 4 in. dust plug (Figure 1, Item 1) from reducer assembly (Figure 1, Item 2).
2. Remove 3 in. dust cap (Figure 1, Item 3) from reducer assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from reducer assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 3 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove split rings (Figure 1, Item 6) from 4 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) from chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Item 8) from 3 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Item 8) from chain (Figure 1, Item 9).

END OF TASK

CLEAN 4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY

1. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
2. Install split rings (Figure 1, Item 8) on 3 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
4. Install split rings (Figure 1, Item 6) on 4 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 3 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into reducer assembly (Figure 1, Item 2).
7. Install 3 in. dust cap (Figure 1, Item 3) on reducer assembly (Figure 1, Item 2).
8. Install 4 in. dust plug (Figure 1, Item 1) in reducer assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY, MALE 4 IN. X FEMALE 3 IN.
PART NUMER 602630401
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (WP 0166, Item 37)
Gasket (WP 0167. Item 38)

Personnel Required

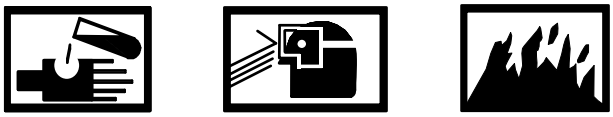
Petroleum Supply Specialist 92F

Equipment Condition

Reducer assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY (CAMLOCK CONNECTOR)

WARNING



CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY (CAMLOCK CONNECTOR - CONTINUED)

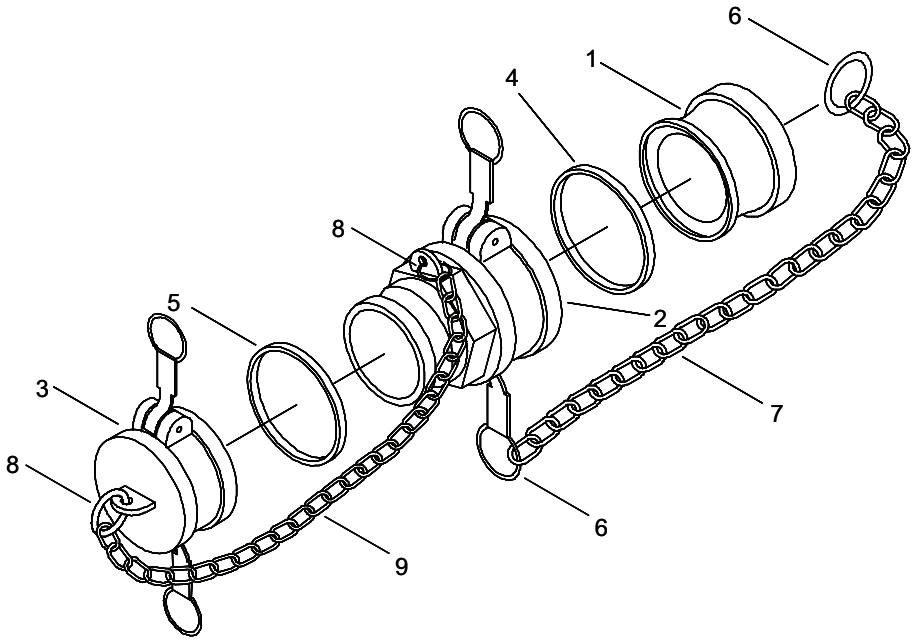


Figure 1. 4 In. Male X 3 In. Female Reducer Assembly.

1. Remove 3 in. dust plug (Figure 1, Item 1) from reducer assembly (Figure 1, Item 2).
2. Remove 4 in. dust cap (Figure 1, Item 3) from reducer assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from reducer assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 4 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove split rings (Figure 1, Item 6) from 3 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) from chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Item 8) from 4 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Item 8) from chain (Figure 1, Item 9).

END OF TASK

CLEAN 4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY

1. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
2. Install split rings (Figure 1, Item 8) on 4 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
4. Install split rings (Figure 1, Item 6) on 3 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 4 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into reducer assembly (Figure 1, Item 2).
7. Install 3 in. dust plug (Figure 1, Item 1) on reducer assembly (Figure 1, Item 2).
8. Install 4 in. dust cap (Figure 1, Item 3) in reducer assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE
REDUCER ASSEMBLY FEMALE 6 IN. X MALE 4 IN.
PART NUMBER 602660401
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Screwdriver (WP 0163, Table 2 BII, Item 3)

Personnel Required

Petroleum Supply Specialist 92F

Materials/Parts

Apron, utility (WP 0165, Item 2)
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 4)
Gasket (WP 0166, Item 37)
Gasket (WP 0166, Item 38)

Equipment Condition

Reducer assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION FIRE

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY - CONTINUED

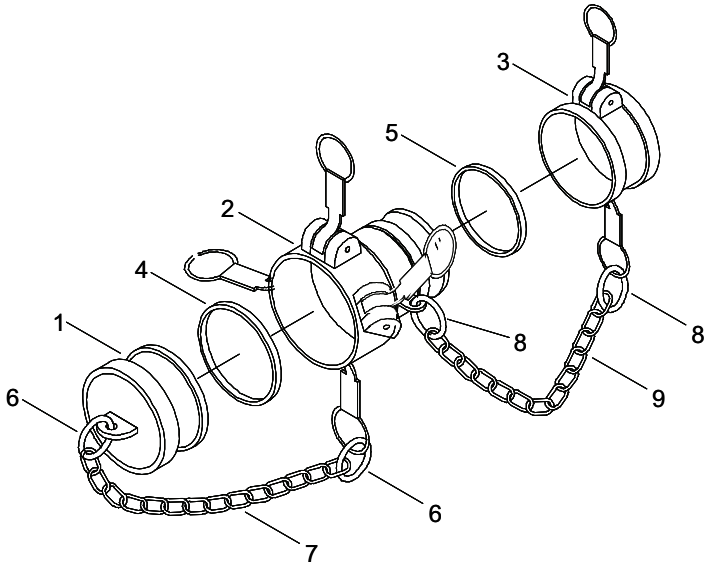


Figure 1. 6 In. Female X 4 In. Male Reducer Assembly.

1. Remove 6 in. dust plug (Figure 1, Item 1) from reducer assembly (Figure 1, Item 2).
2. Remove 4 in. dust cap (Figure 1, Item 3) from reducer assembly (Figure 1, Item 2).
3. Remove gasket (Figure 1, Item 4) from reducer assembly (Figure 1, Item 2).
4. Discard gasket (Figure 1, Item 4).
5. Remove gasket (Figure 1, Item 5) from 4 in. dust cap (Figure 1, Item 3).
6. Discard gasket (Figure 1, Item 5).
7. Remove split rings (Figure 1, Item 6) from 6 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
8. Remove split rings (Figure 1, Item 6) from chain (Figure 1, Item 7).
9. Remove split rings (Figure 1, Item 8) from 4 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
10. Remove split rings (Figure 1, Item 8) from chain (Figure 1, Item 9).

END OF TASK

CLEAN 6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY

1. Install split rings (Figure 1, Item 8) on chain (Figure 1, Item 9).
2. Install split rings (Figure 1, Item 8) on 4 in. dust cap (Figure 1, Item 3) and reducer assembly (Figure 1, Item 2).
3. Install split rings (Figure 1, Item 6) on chain (Figure 1, Item 7).
4. Install split rings (Figure 1, Item 6) on 6 in. dust plug (Figure 1, Item 1) and reducer assembly (Figure 1, Item 2).
5. Install new gasket (Figure 1, Item 5) into 4 in. dust cap (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 4) into reducer assembly (Figure 1, Item 2).
7. Install 4 in. dust cap (Figure 1, Item 3) on reducer assembly (Figure 1, Item 2).
8. Install 6 in. dust plug (Figure 1, Item 1) in reducer assembly (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

CHAPTER 6

FIELD MAINTENANCE INSTRUCTIONS FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

FIELD MAINTENANCE
SERVICE UPON RECEIPT OF MATERIEL

INITIAL SETUP:

Personnel Required	References
Quartermaster and Chemical Repairman 63J	SF 361
Petroleum Supply Specialist 92F	DA PAM 750-8

GENERAL INFORMATION

The following paragraphs contain the procedures for unloading, unpacking and general checking of the unpacked FSSP.

Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 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).

SITING REQUIREMENTS

The FSSP should be assembled on a level area free of debris and large rocks. Special care should be taken to ensure that no hose assemblies will be placed on or near rocks or other objects that may have sharp points or edges which may damage the hose assemblies when the FSSP is operated. Be sure that the site allows for enough room to assemble the fuel system. When configured as shown in this technical manual, the FSSP will take up an area approximately 600 ft. X 800 ft.

UNLOADING

Unloading Metal Containers

The components of the FSSP are shipped in ISO and TRICON containers. The containers may be lifted by forklift, crane or sling. To unload the fuel system, perform the following steps:

Check all containers for damage. Damaged containers indicate probable damage to equipment.

Remove all blocking and tie downs that may have been used to secure the containers onto the carrier.

Use a forklift truck or other suitable material handling equipment to remove the containers from the carrier.

If a special design reusable container is involved for either the end item or components which are authorized for replacements, instructions shall be prepared to report or reenter the empty container through supply channels. Instructions shall be prepared on how to package the unserviceable component in the empty container in the same manner that the new component was packaged if a component is being replaced.

Unpacking

Unpack ISO containers. Refer to Shipping and Storage Instructions (SSI).

CHECK UNPACKED EQUIPMENT

Table 1. Equipment Inspection.

COMPONENT	ACCEPTABLE	REPAIRABLE	NONREPARABLE
FSSP ISO CONTAINER			
Exterior	Minor rust, cracks, indentations or splits that would not impair waterproofing or serviceability of containers.	Dents or bending that does not affect access door operation.	Damage or bending that will not allow doors to open.
Interior	Items within the container have remained in stowed position. No broken, dented or cracked equipment.	Broken or missing hardware or handles.	Damage to pallets that would prevent storage of equipment.
Hardware	Hardware is present and tight.	Hardware is missing or loose.	None.
	Nuts, bolts, screws and fasteners present and in good condition.	Nuts, bolts, screws and fasteners that can be replaced or properly sealed.	None.
Container	Free from damage.	Broken or missing handles.	None.
FSSP COMPONENTS			
Hoses	Minor cuts, cracks and deterioration that would not impair serviceability of hoses.	Minor cuts, cracks and deterioration that does not affect serviceability of hoses.	Cuts, cracks and deterioration that affect serviceability of hoses.
Couplings	Minor rust or corrosion that would not impair serviceability of couplings.	Minor rust or corrosion that can be removed without affecting the serviceability of the couplings.	Rust, damage or corrosion that affect serviceability of the couplings.
Tee Assemblies	Minor rust or corrosion that would not impair serviceability of tee assemblies.	Minor rust or corrosion that can be removed without affecting the serviceability of the tee assemblies.	Rust, damage or corrosion that affect serviceability of the tee assemblies.
Valve Assemblies	Minor rust or corrosion that would not impair serviceability of valve assemblies.	Minor rust or corrosion that can be removed without affecting the serviceability of the valve assemblies.	Rust, damage or corrosion that affect serviceability of the valve assemblies.
Adapter Assemblies	Minor rust or corrosion that would not impair serviceability of adapter assemblies.	Minor rust or corrosion that can be removed without affecting the serviceability of the adapter assemblies.	Rust, damage or corrosion that affect serviceability of the adapter assemblies.
Nozzle Assemblies	Minor rust or corrosion that would not impair serviceability of nozzle assemblies.	Minor rust or corrosion that can be removed without affecting the serviceability of the nozzle assemblies.	Rust, damage or corrosion that affect serviceability of the nozzle assemblies.

Table 1. Equipment Inspection – Continued.

COMPONENT	ACCEPTABLE	REPAIRABLE	NONREPARABLE
FSSP Components – Continued			
Tank Assemblies	Minor cuts, tears or deterioration that would not impair serviceability of the tank assemblies.	Minor cuts, tears or deterioration that would not impair serviceability of the tank assemblies.	Cuts, tears or deterioration that affect serviceability of the tank assemblies.
Pumping Assembly	Free from major damage.	Any damage that does not affect the serviceability of the pump.	Major damage that affects the serviceability of the pump.
Filter-Separator	Free from major damage.	Any damage that does not affect the serviceability of the filter-separator.	Major damage that affects the serviceability of the filter-separator.

INSTALLATION INSTRUCTIONS

Tools, test equipment and materials needed for installation. The FSSP can be assembled by hand and no special tools, test equipment or other materials are needed for assembly of the fuel system.

ASSEMBLE EQUIPMENT

1. Refer to the Operator instructions in Chapter 2 of this technical manual.
2. Place all components of the FSSP into position.

PRELIMINARY SERVICING OF EQUIPMENT

Refer to the operator PMCS procedures in Chapter 5 of this technical manual for instructions on lubricating requirements prior to operating equipment.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
PROCEDURES INTRODUCTION INFORMATION

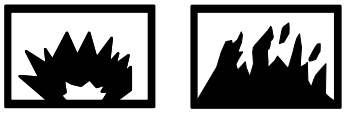
INTRODUCTION

GENERAL

Systematic, periodic, Preventive Maintenance Checks and Services (PMCS) are essential to ensure that the FSSP is ready for operation at all times. The purpose of a preventive maintenance program is to discover and correct defects and deficiencies before they can cause serious damage or complete failure of the equipment. Any effective preventive maintenance program must begin with the indoctrination of Operators to report all unusual conditions noted during daily checks or actual operation to Field Maintenance. All defects and deficiencies discovered during maintenance inspections must be recorded, together with corrective action taken, on DA Form 2404 (Equipment Inspection and Maintenance Worksheet), or DA Form 5988-E (Equipment Maintenance and Inspection Worksheet). Pay attention to WARNING and CAUTION statements. A WARNING means someone could be injured or killed. A CAUTION means equipment could get damaged.

A schedule for Field Maintenance inspection and service should be established immediately after installation of the fuel system. When operating under unusual conditions, such as a very dusty or sandy environment, it may be necessary to reduce the interval to monthly or even less if conditions are extreme.

WARNING



EXPLOSION **FIRE**

Severe injury or death can occur from fire and explosion caused by fuel and fuel fumes. NEVER allow open flames or hot objects to get near the FSSP.

The FSSP has very few requirements for Field Maintenance PMCS. However, the D-1 Nozzle, pumping assemblies, filter-separators and fuel tanks do have Field Maintenance PMCS contained in their own separate manuals. These manuals are listed in the PMCS table. Refer to the applicable technical manual for these items for proper Field Maintenance PMCS procedures and perform those procedures.

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

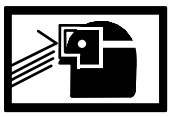
The right-hand column of the PMCS table list conditions that make the equipment not fully mission capable. Write up items not-fixed on DA Form 2404 or DA Form 5988-E for Field Maintenance. For further information on how to use these forms, see DA PAM 750-8.

INTRODUCTION - CONTINUED

LEAKAGE DEFINITION

WARNING

CHEMICAL



EYE PROTECTION

A I N

Equipment operation is allowed with minor leakages (Class I or II), except for fuel leaks. Of course, consideration must be given to the fluid capacity of the item or system being checked. When in doubt, ask your supervisor.

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

Class III leaks should be reported immediately to your supervisor.

It is necessary for you to know how fluid leakage affects the status of the vehicle. Following are definitions of the classes of leakage an operator or crew needs to know to be able to determine the condition of the leak. Learn and then be familiar with them, and REMEMBER - WHEN IN DOUBT, ASK YOUR SUPERVISOR.

LEAKAGE DEFINITIONS FOR CREW/OPERATOR PMCS

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.

CLASS III - Leakage of fluid great enough to form drops that fall from the item being checked.

INSPECTION

Look for signs of a problem or trouble. Senses help here. You can feel, smell, hear or see many problems. Be alert when using the equipment.

Inspect to see if items are in good condition. Are they correctly assembled, stowed, secured, excessively worn, leaking, corroded or properly lubricated? Correct any problems found or notify Field Maintenance.

There are some common items to check all over the equipment. These include the following:

1. Bolts, clamps, nuts and screws: Continuously check for looseness. Look for chipped paint, bare metal, rust or corrosion around bolt and screw heads and nuts. Tighten them when you find them loose. If tools are not available, contact Field Maintenance.
2. Welds: Many items on the equipment are welded. To check these welds, look for chipped paint, rust, corrosion or gaps. When these conditions exist, notify Field Maintenance on DA Form 2404.
3. Electrical wires, connectors and harnesses: Tighten loose connectors. Look for cracked or broken insulation, bare wires and broken connectors. If any are found, notify Field Maintenance.
4. Hoses and fluid lines: Look for wear, damage and leaks, and make sure clamps and fittings are tight. Wet spots mean a leak. A stain by a fitting or connector can also mean a leak. When you find a leak, notify Field Maintenance.

CLEANING AND LUBRICATION

LUBRICATION SERVICE INTERVALS – NORMAL CONDITIONS

For safer, more trouble free operations, make sure that your equipment is serviced when it needs it. For the proper lubrication and service intervals, refer to the Operator's PMCS (WP 0112).

LUBRICATION SERVICE INTERVALS – UNUSUAL CONDITIONS

Your equipment will require extra service and care when you operate under unusual conditions. High or low temperatures, long periods of hard use or continued use in sand, water, mud or snow will break down the lubricant, requiring you to add or change lubricant more often.

Proper cleaning and lubrication can aid in avoiding possible problems or trouble, so make it a habit to do the following:

A I N

Follow all cleaning and lubrication instructions carefully; failure to do so can result in damage to equipment.

1. Thoroughly wash all equipment exposed to salt spray with clean, fresh water.
2. Clean parts to be lubricated with solvent cleaning compound, MIL-PRF-680 or equivalent. Do not use fluid or semi-fluid lubricant on SFD coated surfaces. Wipe surface dry before lubricating.
3. Clean grease fittings before lubrication.
4. Lubricate all equipment at conclusion of the operation before equipment storage.
5. Always use the PMCS lubrication instructions as a guide.
6. Never use too much lubricant.
7. Never use the wrong type or grade of lubricant.
8. Lubricate more during constant use and less during inactive periods.
9. Use the correct grade of lubricant for seasonal temperature expected.

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 is typically associated with rusting of metals or galvanic corrosion which produces a white powder. Corrosion also includes deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling or breaking of the materials may be a corrosion problem. If a corrosion problem is identified, it can be reported using SF 368 Product Quality Deficiency Report. Use of key words such as "corrosion, rust, deterioration" or "cracking" will ensure that the information is identified as a CPC Problem. The form should be submitted to the address specified in DA PAM 750-8.

OIL FILTERS

The FSSP contains no oil filters.

ARMY OIL ANALYSIS PROGRAM (AOAP)

The FSSP is not enrolled in the Army Oil Analysis Program.

WARRANTY INFORMATION

The FSSP is not under warranty.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
AND LUBRICATION PROCEDURES

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J

References
TM 5-5430-219-13
TM 10-4930-248-13&P

Table 1. Preventive Maintenance Checks and Services (PMCS).

ITEM NO.	INTERVAL	MAN-HOURS	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1			600 GPM Pumping Assembly	Perform unit PMCS per appropriate technical manual.	
2			Filter-Separator Assembly	Perform unit PMCS in accordance with appropriate technical manual.	
3			210,000 Tank Assembly	Perform unit PMCS in accordance with TM 10-5430-239-12&P.	
			Nozzle, Closed Circuit Refueling	Perform unit PMCS in accordance with TM 10-4930-248-13&P.	
4	2 Weeks	.3	1.5 In. Fuel and Oil Servicing Nozzle Assembly	Remove, inspect, clean and install nozzle strainer (WP 0148).	
4	2 Weeks	.3	1 In. Fuel and Oil Servicing Nozzle Assembly	Remove, inspect, clean and install nozzle strainer (WP 0147).	
5	2 Weeks	.3	D1 Nozzle Assembly, Part Number 64201CGH2MQ	Remove, inspect, clean and install nozzle assembly strainer (WP 0150).	
6	2 Weeks	.3	D1 Nozzle Assembly, Part Number 64201CF4GHX	Remove, inspect, clean and install nozzle strainer (WP 0149).	
7	2 Weeks	.3	D1 Nozzle Assembly, Part Number 64201CGH2KQ	Remove, inspect, clean and install nozzle assembly strainer (WP 0151).	

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
PUMPING ASSEMBLY (600 GPM)
PART NUMBER 78023-100
REPAIRS

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J

PUMPING ASSEMBLY (600 GPM), PART NUMBER 78023-100 REPAIRS

Refer to TM 10-4320-374-13&P for Maintenance procedures for the 600 GPM Pumping Assembly.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
FILTER-SEPARATOR ASSEMBLY, LIQUID FUEL
PART NUMBER MEFS18V350M
REPAIRS

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)

Personnel Required

Quartermaster and Chemical Repairman 63J

LIQUID FUEL FILTER-SEPARATOR ASSEMBLY, PART NUMBER MEFS18V350M REPAIRS

Refer to TM 10-4330-235-13&P for Maintenance procedures for the Liquid Fuel Filter-Separator Assembly. In order to change the filter elements, the maintainer must use 27mm socket wrench from the SATS.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING
PART NUMBER 64017B, LEAKS OR WILL NOT JOIN WITH OTHER COMPONENTS
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

TM 10-4930-248-13&P

Personnel Required

Quartermaster and Chemical Repairman 63J

TROUBLESHOOTING PROCEDURES

ASSEMBLE AND DISASSEMBLE NOZZLE ASSEMBLY, CLOSED CIRCUIT REFUELING, PART NUMBER 64017B

Refer to TM 10-4930-248-13&P for troubleshooting the CCR Nozzle Assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL ADDITIVE INJECTION ASSEMBLY, 6 IN. IN-LINE
PART NUMBER TPI-4T-4A-1,
REPAIR

INITIAL SETUP:

Tools

Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

References

TM 10-4930-364-13P

Personnel Required

Quartermaster and Chemical Repairman 63J

FUEL ADDITIVE INJECTION ASSEMBLY, 6 IN. IN-LINE PART NUMBER TPI-4T-4A-1

Refer to TM 10-4930-364-13P for troubleshooting the Fuel Additive Injection Assembly.

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL TANK, COLLAPSIBLE, BETA, 210K GAL.
PART NUMBER GTA-210K
REPAIR

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J

References
TM 10-3835-242-14

FUEL TANK, COLLAPSIBLE, BETA, 210K GAL., PART NUMBER GTA-210K

Refer to TM 10-5430-239-12&P for maintenance procedures for 210 gallon collapsible BETA fuel tank.

END OF WORK PACKAGE

FIELD MAINTENANCE
CONTAINER CARGO, TRICON
PART NUMBER BXTBCTTAT PD0003
REPAIR

INITIAL SETUP:

Personnel Required

Quartermaster and Chemical Repairman 63J

References

TM 55-8145-203-13&P

CONTAINER CARGO, TRICON, PART NUMBER BXTBCTTAT PD0003300.

Refer to TM 55-8145-203-13&P for maintenance procedures for the TRICON Cargo Container, Part Number **BXTBCTTAT PD0003**.

END OF WORK PACKAGE

FIELD MAINTENANCE
CONTAINER CARGO, ISO 20-FT.
PART NUMBER BX2ACTP01D0000
REPAIR

INITIAL SETUP:

Personnel Required
Quartermaster and Chemical Repairman 63J

CONTAINER CARGO, ISO 20-FT, PART NUMBER BX2ACTP01D0000

Refer to applicable technical manual for the maintenance procedures for the Cargo Container, ISO 20-FT, Part Number BX2ACTP01D0000.

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, BALL, 2 IN.
PART NUMBER 78048-100
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, pipe 48 in. (WP 0162, Item 12)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Sealing compound (WP 0165, Item 11)
Gasket (2) (WP 0166, Item 36)

Equipment Condition

Ball valve assembly removed from FSSP installation (WP 0109).

DISASSEMBLE 2 IN. BALL VALVE ASSEMBLY

WARNING

CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign object enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 2 IN. BALL VALVE ASSEMBLY-CONTINUED

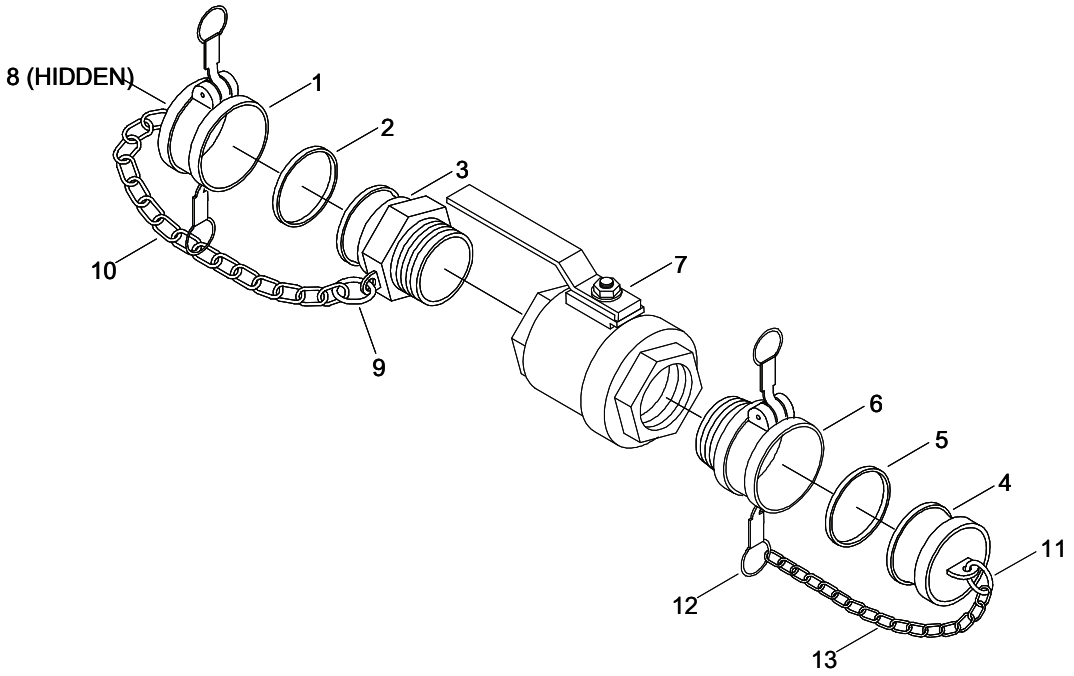


Figure 1. 2 In. Ball Valve Assembly.

1. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from male coupling half (Figure 1, Item 3).
2. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from female coupling half (Figure 1, Item 6).

N

Mark a reference indicator for reinstallation of both couplings to butterfly valve.

3. Discard gaskets (Figure 1, Items 2 and 5).
4. Remove split ring (Figure 1, Item 8) from quick disconnect dust cap (Figure 1, Item 1).
5. Remove split ring (Figure 1, Item 9) from male coupling half (Figure 1, Item 3).
6. Remove split ring (Figure 1, Item 8) from chain (Figure 1, Item 10).
7. Remove split ring (Figure 1, Item 9) from chain (Figure 1, Item 10).
8. Remove split ring (Figure 1, Item 11) from quick disconnect dust plug (Figure 1, Item 4).
9. Remove split ring (Figure 1, Item 12) from female coupling half (Figure 1, Item 6).
10. Remove split ring (Figure 1, Item 11) from chain (Figure 1, Item 13).
11. Remove split ring (Figure 1, Item 12) from chain (Figure 1, Item 13).
12. Using an assistant, one strap wrench and one adjustable wrench, remove male coupling half (Figure 1, Item 3) and female coupling half (Figure 1, Item 6) from 2 in. ball valve (Figure 1, Item 7).

END OF TASK

CLEAN 2 IN. BALL VALVE ASSEMBLY COMPONENTS

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. BALL VALVE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Check for smooth operation of handle on ball valve. If handle does not operate smoothly, replace components with serviceable like Items.

END OF TASK

ASSEMBLE 2 IN. BALL VALVE ASSEMBLY

1. Apply sealing compound to external threads of female coupling half (Figure 1, Item 6) and male coupling half (Figure 1, Item 3).
2. Install female coupling half (Figure 1, Item 6) and male coupling half (Figure 1, Item 3) into 2 in. ball valve (Figure 1, Item 7).
3. Using an assistant, one strap wrench and one adjustable wrench, tighten female coupling half (Figure 1, Item 6) and male coupling half (Figure 1, Item 3).
4. Install split ring (Figure 1, Item 12) onto chain (Figure 1, Item 13).
5. Install split ring (Figure 1, Item 11) onto chain (Figure 1, Item 13).
6. Install split ring (Figure 1, Item 12) onto female coupling half (Figure 1, Item 6).
7. Install split ring (Figure 1, Item 11) onto quick disconnect dust plug (Figure 1, Item 4).
8. Install split ring (Figure 1, Item 9) onto chain (Figure 1, Item 10).
9. Install split ring (Figure 1, Item 8) onto chain (Figure 1, Item 10).

ASSEMBLE 2 IN. BALL VALVE ASSEMBLY-CONTINUED

10. Install split ring (Figure 1, Item 9) onto male coupling half (Figure 1, Item 3).
11. Install split ring (Figure 1, Item 8) onto quick disconnect dust cap (Figure 1, Item 1).
12. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) onto female coupling half (Figure 1, Item 6).
13. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto male coupling half (Figure 1, Item 3).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, BUTTERFLY, 4 IN.
PART NUMBER 78042-100
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2) (WP 0166, Item 38)
Washer, lock (8) (WP 0166, Item 61)

Equipment Condition

Butterfly valve assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. BUTTERFLY VALVE ASSEMBLY (CAMLOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. BUTTERFLY VALVE ASSEMBLY (CAMLOCK CONNECTOR)-CONTINUED

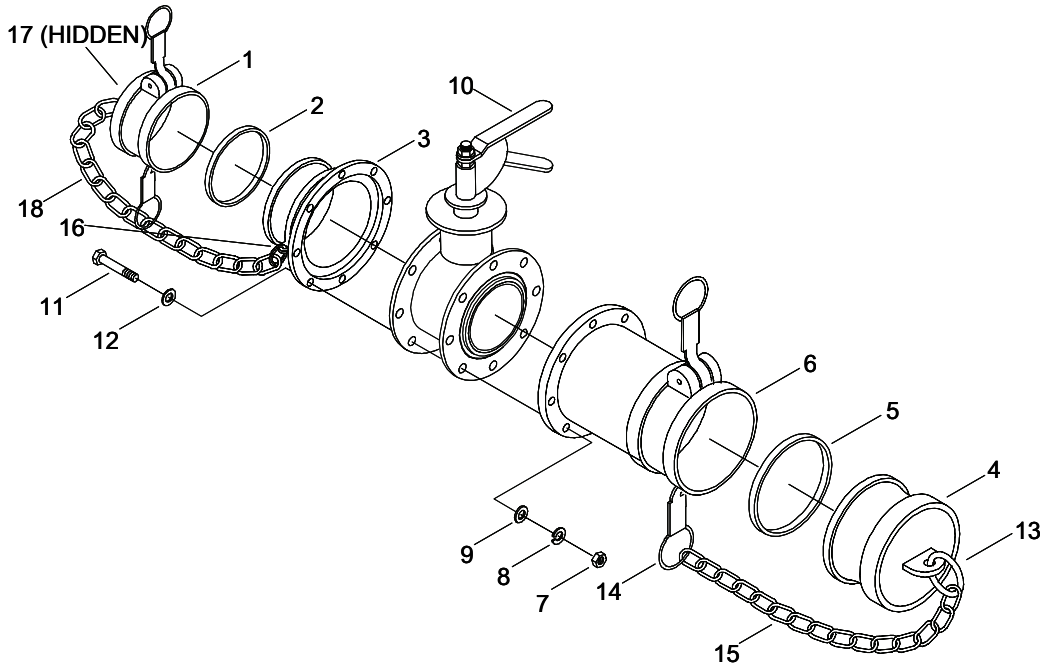


Figure 1. 4 In. Butterfly Valve Assembly.

1. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
2. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).

N

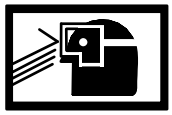
Mark a reference indicator for reinstallation of both couplings to butterfly valve.

3. Remove eight nuts (Figure 1, Item 7), eight lock washers (Figure 1, Item 8), eight flat washers (Figure 1, Item 9) and coupling (Figure 1, Item 6) from butterfly valve (Figure 1, Item 10).
4. Remove eight bolts (Figure 1, Item 11), eight flat washers (Figure 1, Item 12) and coupling (Figure 1, Item 3) from butterfly valve (Figure 1, Item 10).
5. Discard gaskets (Figure 1, Item 2, 5) and lock washers (Figure 1, Item 8).
6. Remove split rings (Figure 1, Item 13, 14) from quick disconnect dust plug (Figure 1, Item 4) and coupling (Figure 1, Item 6).
7. Remove split rings (Figure 1, Item 13, 14) from chain (Figure 1, Item 15).
8. Remove split rings (Figure 1, Item 16, 17) from coupling (Figure 1, Item 3) and quick disconnect dust cap (Figure 1, Item 1).
9. Remove split rings (Figure 1, Item 16, 17) from chain (Figure 1, Item 18).

END OF TASK

CLEAN 4 IN. BUTTERFLY VALVE ASSEMBLY COMPONENT

WARNING


CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. BUTTERFLY VALVE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect all split rings and chains for cracks, distortion and corrosion. If cracks, distortion or corrosion is found, replace with a serviceable like Item.
3. Check butterfly valve assembly for cracked surfaces, bent handle and for smooth operation. If cracked surfaces, bent handle are found or valve does not operate smoothly, replace butterfly valve with a serviceable like Item.
4. Check butterfly valve for fuel leakage at shutoff valve. If shutoff valve leaks fuel, replace butterfly valve with a serviceable like Item.

END OF TASK

ASSEMBLE 4 IN. BUTTERFLY VALVE ASSEMBLY

1. Install split rings (Figure 1, Item 16, 17) on chain (Figure 1, Item 18).
2. Install split rings (Figure 1, Item 16, 17) on coupling (Figure 1, Item 3) and quick disconnect dust cap (Figure 1, Item 1).
3. Install split rings (Figure 1, Item 13, 14) on chain (Figure 1, Item 15).
4. Install split rings (Figure 1, Item 13, 14) on quick disconnect dust plug (Figure 1, Item 4) and coupling (Figure 1, Item 6).
5. Install new gasket (Figure 1, Item 5) in coupling (Figure 1, Item 6). Also install new gasket (Figure 1, Item 2) in dust cap (Figure 1, Item 1)

ASSEMBLE 4 IN. BUTTERFLY VALVE ASSEMBLY-CONTINUED

6. Install eight bolts (Figure 1, Item 11) and eight flat washers (Figure 1, Item 12) through coupling (Figure 1, Item 3), butterfly valve (Figure 1, Item 10) and coupling (Figure 1, Item 6).
7. Install eight flat washers (Figure 1, Item 9), eight new lock washers (Figure 1, Item 8) and eight nuts (Figure 1, Item 7) on bolts (Figure 1, Item 11). Hand tighten eight nuts (Figure 1, Item 7) until head of bolts and nuts are seated flat against couplings.
8. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 7) to 37-43 ft lb (50–58 N-m).
9. Install quick disconnect dust plug (Figure 1, Item 4) until head of bolts (Figure 1, Item 11) and Nuts (Figure 1, Item 7) are seated flat against couplings (Figure 1, Item 6).
10. Install quick disconnect dust cap (Figure 1, Item 1) on coupling (Figure 1, Item 3).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, GATE, 4 IN.
PART NUMBER 13228E3435
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2) (WP 0166, Item 38)
Gasket (2) (WP 0166, Item 38)
Washer, lock (8) (WP 0166, Item 61)
Ring, packing (3) (WP 0166, Item 29)
Gasket, valve bonnet (WP 0166, Item 30)
Retainer, packing (WP 0166, Item 28)
Washer, lock (8) (WP 0166, Item 31)

Equipment Condition

4 in gate valve assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. GATE VALVE ASSEMBLY (CAM-LOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. GATE VALVE ASSEMBLY (CAM-LOCK CONNECTOR)-CONTINUED

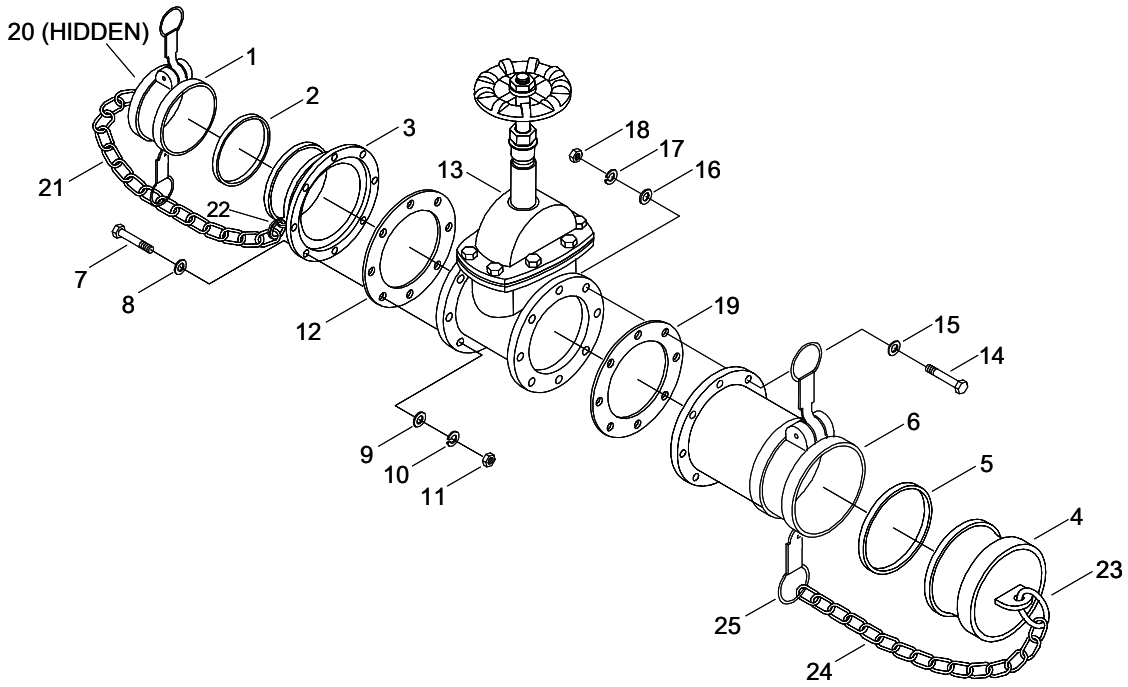


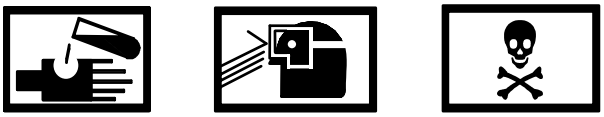
Figure 1. 4 In. Gate Valve Assembly.

1. Remove split ring (Figure 1, Item 20) from quick disconnect dust cap (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 20) from chain (Figure 1, Item 21).
3. Remove split ring (Figure 1, Item 22) from chain (Figure 1, Item 21).
4. Remove split ring (Figure 1, Item 22) from coupling (Figure 1, Item 3).
5. Remove split ring (Figure 1, Item 23) from quick disconnect dust plug (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 23) from chain (Figure 1, Item 24).
7. Remove split ring (Figure 1, Item 25) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 25) from chain (Figure 1, Item 24).
9. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
10. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
11. Remove eight bolts (Figure 1, Item 7), eight flat washers (Figure 1, Item 8), eight flat washers (Figure 1, Item 9), eight lock washers (Figure 1, Item 10), eight nuts (Figure 1, Item 11), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 12) from gate valve (Figure 1, Item 13).
12. Discard gaskets (Figure 1, Item 2, 5 and 12) and lock washers (Figure 1, Item 10).
13. Remove eight bolts (Figure 1, Item 14), eight flat washers (Figure 1, Item 15), eight flat washers (Figure 1, Item 16), eight lock washers (Figure 1, Item 17), eight nuts (Figure 1, Item 18), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 19) from gate valve (Figure 1, Item 13).
14. Discard gaskets (Figure 1, Item 19) and lock washers (Figure 1, Item 17).

END OF TASK

CLEAN 4 IN. GATE VALVE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. GATE VALVE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Check gate valve assembly for cracked surfaces, bent hand wheel and for smooth hand wheel operation. If cracked surfaces, bent hand wheel are found or hand wheel does not operate smoothly, repair gate valve.

END OF TASK

ASSEMBLE 4 IN. GATE VALVE ASSEMBLY

1. Install eight bolts (Figure 1, Item 14) and flat washers (Figure 1, Item 15) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 19) and gate valve (Figure 1, Item 13) flange.
2. Install eight flat washers (Figure 1, Item 16), eight new lock washers (Figure 1, Item 17) and eight nuts (Figure 1, Item 18) on bolts (Figure 1, Item 14). Hand tighten eight nuts (Figure 1, Item 18).
3. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 18) to 37–43 ft lb (50–58 N-m).
4. Install eight bolts (Figure 1, Item 7) and flat washers (Figure 1, Item 8) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 12) and gate valve (Figure 1, Item 13) flange.
5. Install eight flat washers (Figure 1, Item 9), eight new lock washers (Figure 1, Item 10) and eight nuts (Figure 1, Item 11) on bolts (Figure 1, Item 7). Hand tighten eight nuts (Figure 1, Item 11).

N

Verify torque on eight nuts a minimum of 24 hours after torque was applied.

6. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 11) to 37–43 ft lb (50–58 N-m).

ASSEMBLE 4 IN. GATE VALVE ASSEMBLY - CONTINUED

7. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) in coupling (Figure 1, Item 6).
8. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) on coupling (Figure 1, Item 3).
9. Install split ring (Figure 1, Item 25) on coupling (Figure 1, Item 6).
10. Install split ring (Figure 1, Item 25) on chain (Figure 1, Item 24).
11. Install split ring (Figure 1, Item 23) on chain (Figure 1, Item 24).
12. Install split ring (Figure 1, Item 23) on quick disconnect dust plug (Figure 1, Item 4).
13. Install split ring (Figure 1, Item 22) on chain (Figure 1, Item 21).
14. Install split ring (Figure 1, Item 22) on coupling (Figure 1, Item 3).
15. Install split ring (Figure 1, Item 20) on chain (Figure 1, Item 21).
16. Install split ring (Figure 1, Item 20) on quick disconnect dust cap (Figure 1, Item 1).

END OF TASK

DISASSEMBLE 4 IN. GATE VALVE

N

Repair is limited to replacement of parts found defective during inspection.

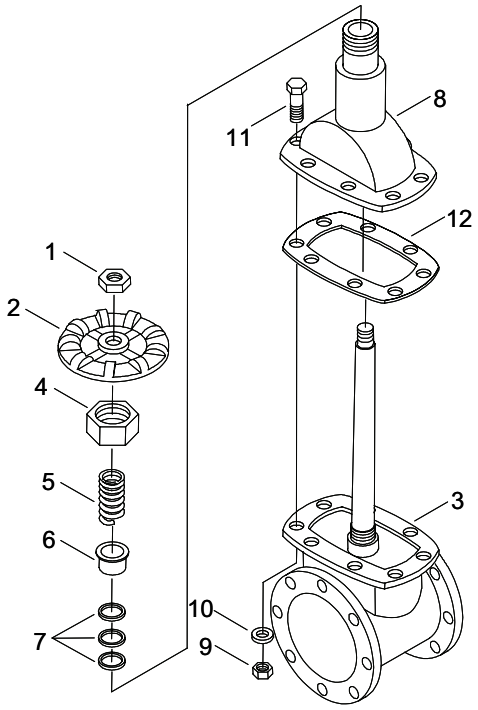


Figure 2. 4 In. Gate Valve.

1. Remove wheel nut (Figure 2, Item 1) and hand wheel (Figure 2, Item 2) from gate valve (Figure 2, Item 3).

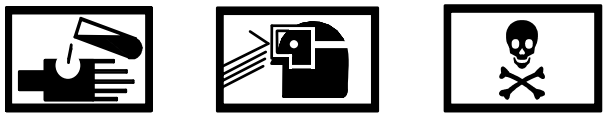
DISASSEMBLE 4 IN. GATE VALVE - CONTINUED

2. Remove packing nut (Figure 2, Item 4) by hand. Remove gland spring (Figure 2, Item 5), packing retainer (Figure 2, Item 6) from bonnet (Figure 2, Item 8).
3. Remove eight bolts (Figure 2, Item 8), eight lock washers (Figure 2, Item 10) and eight nuts (Figure 2, Item 9) from bonnet (Figure 2, Item 11).
4. Discard lock washers (Figure 2, Item 10).
5. Remove bonnet (Figure 2, Item 8) and bonnet gasket (Figure 2, Item 12) from gate valve (Figure 2, Item 3).
6. Remove four packing rings (Figure 2, Item 7) from bonnet (Figure 2, Item 8)
7. Discard bonnet gasket (Figure 2, Item 12).
8. Discard packing rings (Figure 2, Item 7) and packing retainer (Figure 2, Item 6).

END OF TASK

CLEAN 4 IN. GATE VALVE COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Using a putty knife, remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas.
2. Clean all metallic parts with a cleaning cloth or parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. GATE VALVE COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Check for smooth operation of gate valve by turning shaft. If shaft is bent or does not operate smoothly, replace component with serviceable like Item.

END OF TASK

ASSEMBLE 4 IN. GATE VALVE

1. Install new bonnet gasket (Figure 1, Item 12) and bonnet (Figure 1, Item 8) onto gate valve (Figure 1, Item 3).
2. Install eight bolts (Figure 1, Item 11), eight new lock washers (Figure 1, Item 10) and eight nuts (Figure 1, Item 9) through bonnet (Figure 1, Item 8) and gate valve (Figure 1, Item 3). Hand tighten nuts (Figure 1, Item 9).

N

Verify torque on eight nuts a minimum of 24 hours after torque was applied.

3. Using torque wrench and adapter, torque eight bolts (Figure 1, Item 11) to 40 ft lb (54 N-m).
4. Install new packing rings (Figure 1, Item 7), new packing retainer (Figure 1, Item 5), gland spring (Figure 1, Item 6) and new packing container (Figure 1, Item 4) onto bonnet (Figure 1, Item 8).
5. Install hand wheel (Figure 1, Item 2) and wheel nut (Figure 1, Item 1) on gate valve (Figure 1, Item 3). Tighten wheel nut (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
VALVE ASSEMBLY, GATE, 6 IN.
PART NUMBER 13228E3425
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (2) (WP 0166, Item 37)
Gasket (3) (WP 0166, Item 38)
Washer, lock (10) (WP 0166, Item 61)
Ring, packing (3) (WP 0166, Item 29)
Gasket, valve bonnet (WP 0166, Item 30)
Retainer, packing (WP 0166, Item 28)
Washer, lock (12) (WP 0166, Item 31)

Equipment Condition

6 in. gate valve assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. GATE VALVE ASSEMBLY (CAMLOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. GATE VALVE ASSEMBLY (CAMLOCK CONNECTOR)-CONTINUED

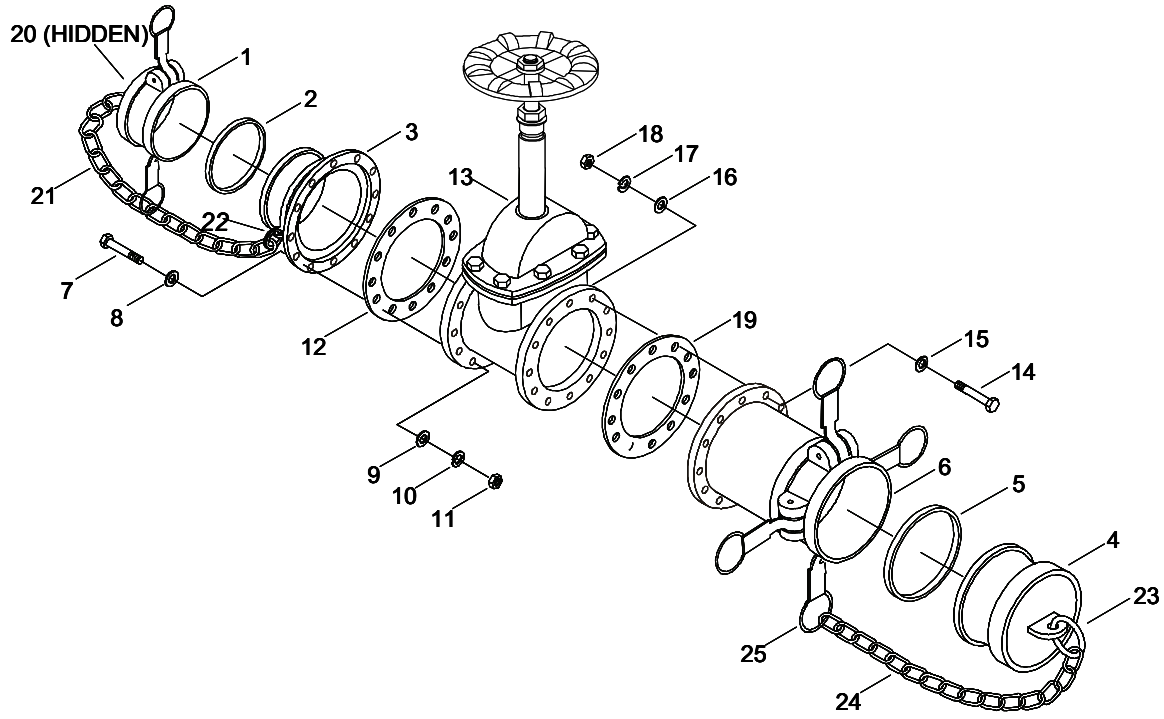


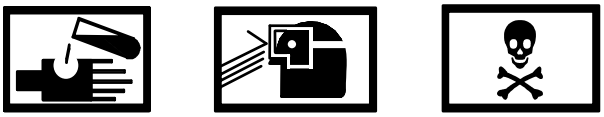
Figure 1. 6 In. Gate Valve Assembly.

1. Remove split ring (Figure 1, Item 20) from quick disconnect dust cap (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 20) from chain (Figure 1, Item 21).
3. Remove split ring (Figure 1, Item 22) from chain (Figure 1, Item 21).
4. Remove split ring (Figure 1, Item 22) from coupling (Figure 1, Item 3).
5. Remove split ring (Figure 1, Item 23) from quick disconnect dust plug (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 23) from chain (Figure 1, Item 24).
7. Remove split ring (Figure 1, Item 25) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 25) from chain (Figure 1, Item 24).
9. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
10. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
11. Remove twelve screws (Figure 1, Item 7), twelve flat washers (Figure 1, Item 8), twelve flat washers (Figure 1, Item 9), twelve lock washers (Figure 1, Item 10), twelve nuts (Figure 1, Item 11), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 12) from gate valve (Figure 1, Item 13) flange.
12. Discard gaskets (Figure 1, Item 2, 5 and 12) and lock washers (Figure 1, Item 10).
13. Remove twelve screws (Figure 1, Item 14), twelve flat washers (Figure 1, Item 15), twelve flat washers (Figure 1, Item 16), twelve lock washers (Figure 1, Item 17), twelve nuts (Figure 1, Item 18), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 19) from gate valve (Figure 1, Item 13) flange.
14. Discard gaskets (Figure 1, Item 19) and lock washers (Figure 1, Item 17).

END OF TASK

CLEAN 6 IN. GATE VALVE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. GATE VALVE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.

2. Check gate valve assembly for cracked surfaces, bent hand wheel and for smooth hand wheel operation. If cracked surfaces, bent hand wheel are found or hand wheel does not operate smoothly, repair gate valve.

END OF TASK

ASSEMBLE 6 IN. GATE VALVE ASSEMBLY

1. Install twelve screws (Figure 1, Item 14) and flat washers (Figure 1, Item 15) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 19) and gate valve (Figure 1, Item 13) flange.

ASSEMBLE 6 IN. GATE VALVE ASSEMBLY-CONTINUED

2. Install twelve flat washers (Figure 1, Item 16), twelve new lock washers (Figure 1, Item 17) and twelve nuts (Figure 1, Item 18) on screws (Figure 1, Item 14). Hand tighten twelve nuts (Figure 1, Item 18).
3. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 11) to 37–43 ft lb (50–58 N-m).
4. Install twelve screws (Figure 1, Item 7) and flat washers (Figure 1, Item 8) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 12) and gate valve (Figure 1, Item 13) flange.
5. Install twelve flat washers (Figure 1, Item 9), twelve new lock washers (Figure 1, Item 10) and twelve nuts (Figure 1, Item 11) on screws (Figure 1, Item 7). Hand tighten twelve nuts (Figure 1, Item 11).

N

Verify torque on twelve nuts a minimum of 24 hours after torque was applied.

6. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).
7. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) in coupling (Figure 1, Item 6).
8. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) on coupling (Figure 1, Item 3).
9. Install split ring (Figure 1, Item 25) on coupling (Figure 1, Item 6).
10. Install split ring (Figure 1, Item 25) on chain (Figure 1, Item 24).
11. Install split ring (Figure 1, Item 23) on chain (Figure 1, Item 24).
12. Install split ring (Figure 1, Item 23) on quick disconnect dust plug (Figure 1, Item 4).
13. Install split ring (Figure 1, Item 22) on chain (Figure 1, Item 21).
14. Install split ring (Figure 1, Item 22) on coupling (Figure 1, Item 3).
15. Install split ring (Figure 1, Item 20) on chain (Figure 1, Item 21).
16. Install split ring (Figure 1, Item 20) on quick disconnect dust cap (Figure 1, Item 1).

END OF TASK

DISASSEMBLE 6 IN. GATE VALVE

N

Repair is limited to replacement of parts found defective during inspection.

N

Open gate valve to its fully open position.

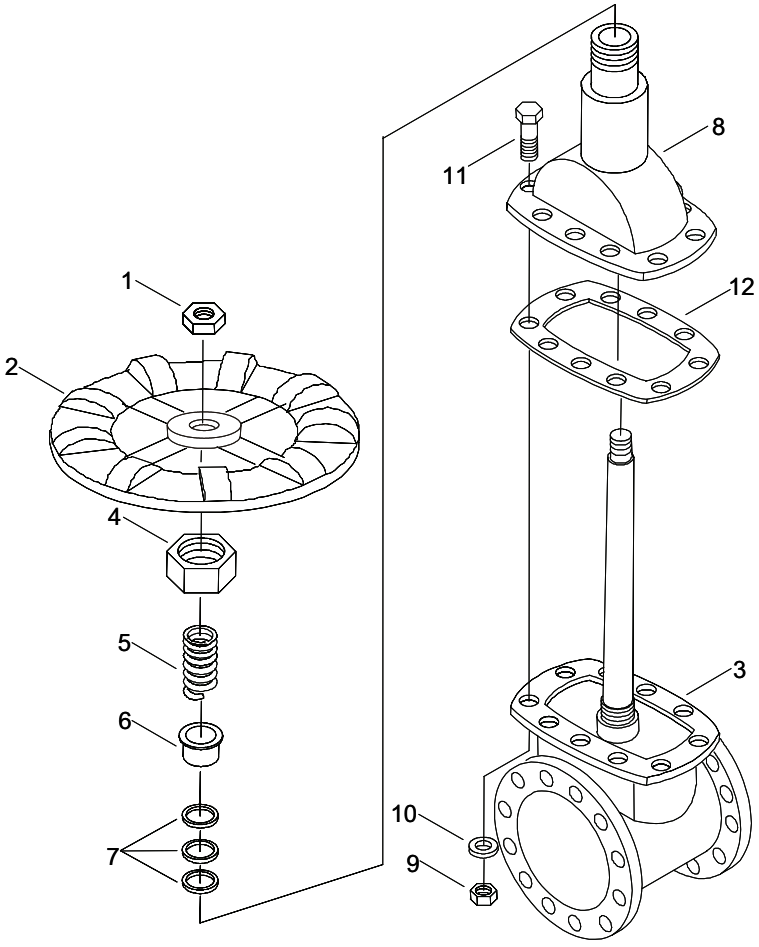


Figure 2. 6 In. Gate Valve.

1. Remove wheel nut (Figure 2, Item 1) and hand wheel (Figure 2, Item 2) from gate valve (Figure 2, Item 3).
2. Remove packing nut (Figure 2, Item 4) by hand. Remove packing gland spring (Figure 2, Item 5), packing gland (Figure 2, Item 6) and three packing rings (Figure 2, Item 7) from bonnet (Figure 2, Item 8).
3. Discard packing rings (Figure 2, Item 7) and packing gland (Figure 2, Item 5).
4. Remove ten hex nuts (Figure 2, Item 9), ten lock washers (Figure 2, Item 10) and 10 cap screws (Figure 2, Item 11) from bonnet (Figure 2, Item 8).
5. Discard lock washers (Figure 2, Item 10).

DISASSEMBLE 6 IN. GATE VALVE - CONTINUED

WARNING

HEAVY PARTS

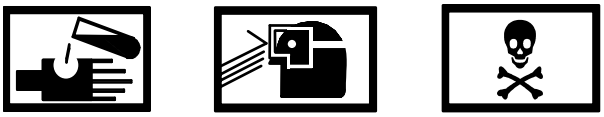
Take care to avoid personal injury/equipment damage. Gate disks may fall off while removing bonnet and shaft.

6. Remove bonnet (Figure 2, Item 8) and bonnet gasket (Figure 2, Item 12) from gate valve (Figure 2, Item 3).
7. Discard bonnet gasket (Figure 2, Item 12).

END OF TASK

CLEAN 6 IN. GATE VALVE COMPONENTS

WARNING



CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Using a putty knife, remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. GATE VALVE COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Check for smooth operation of gate valve by turning shaft. If shaft is bent or does not operate smoothly, replace component with serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. GATE VALVE

1. Install new bonnet gasket (Figure 2, Item 12) and bonnet (Figure 2, Item 8) onto gate valve (Figure 2, Item 3).
2. Install ten cap screws (Figure 2, Item 11), ten new lock washers (Figure 2, Item 10) and ten hex nuts (Figure 2, Item 9) through bonnet (Figure 2, Item 8) and gate valve (Figure 2, Item 3). Hand tighten hex nuts (Figure 1, Item 9).

N

Verify torque on ten cap screws a minimum of 24 hours after torque was applied.

3. Using torque wrench and adapter, torque ten hex nuts (Figure 2, Item 9) to 40 ft lb (54 N-m).
4. Install new packing rings (Figure 2, Item 7), new packing gland (Figure 2, Item 6), gland spring (Figure 2, Item 5) and packing nut (Figure 2, Item 4) onto bonnet (Figure 2, Item 8).
5. Install hand wheel (Figure 2, Item 2) and wheel nut (Figure 2, Item 1) on gate valve (Figure 2, Item 3). Tighten wheel nut (Figure 2, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, FEMALE QUICK DISCONNECT 2 IN. X (DRY-BREAK VALVE) 2 IN.
PART NUMBER 64020GQ
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0–30 in. lb (WP 0162, Item 3)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Sealing compound (WP 0165, Item 11)
Gasket (2) (WP 0166, Item 36)
Petrolatum technical (WP 0165, Item 9)
O-ring (item 50 (WP 0166, Item 50)
Seal, plain (2) (WP 0166, Item 23
Seal, plain (WP 0166, Item 24)
O-ring (WP 0166, Item 54)
O-ring (WP 0166, Item 58)
O-ring (2) (WP 0166, Item 51)
O-ring (WP 0166, Item 55)
Seal, plain (WP 0166, Item 25)
Gasket (WP 0166, Item 45,)

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

N

Repair is limited to replacement of parts found defective during inspection.

Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), then screw (Figure 1, Item 1) should be replaced.

DISASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY - CONTINUED

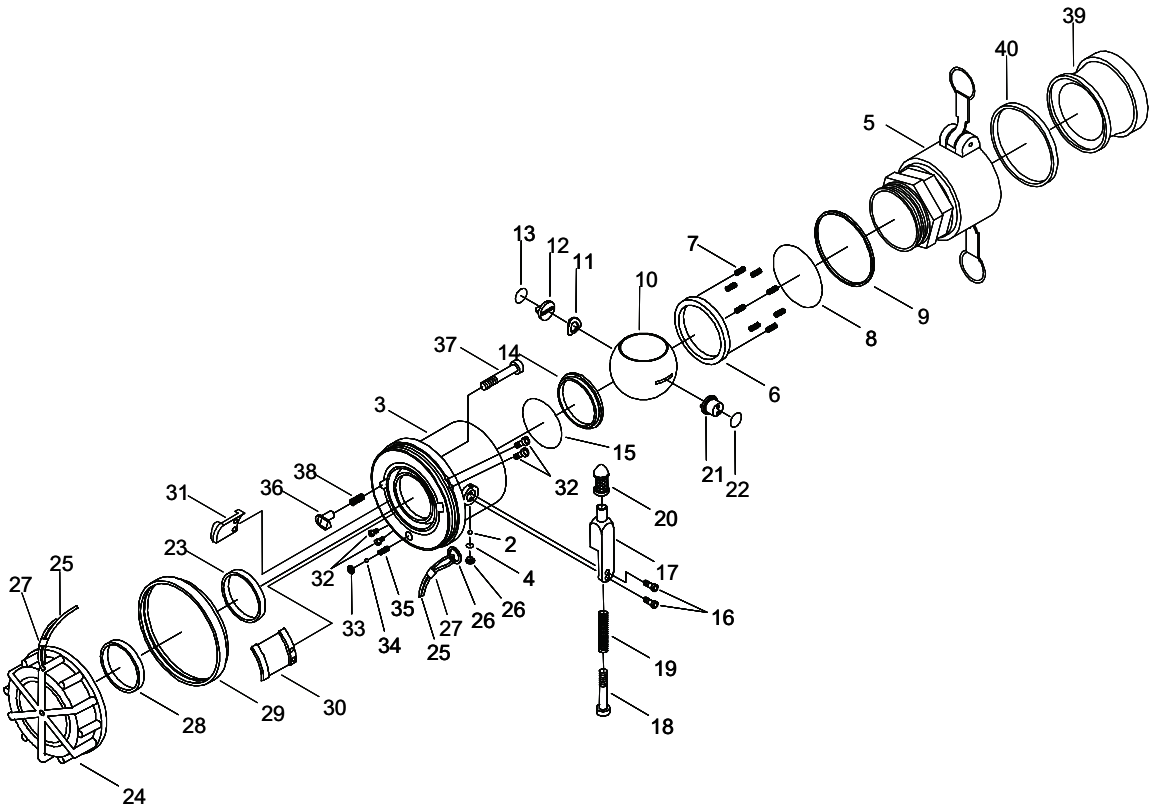


Figure 1. 2 In. Female Quick Disconnect x 2 In. Valved Dry-Break Adapter Assembly.

1. Using a torque wrench and screwdriver bit, check running torque of screw (Figure 1, Item 1). If running torque is less than 3.5 in. lb (0.45 N-m), discard screw (Figure 1, Item 1).

N

Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 2) inside coupling (Figure 1, Item 3).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 3).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for during disassembly.

5. Hold coupling with screw hole toward cleaning cloth and rotate inlet fitting to allow ball bearings (Figure 1, Item 2) to fall onto the cleaning cloth.
6. Remove inlet adapter (Figure 1, Item 5) from coupling (Figure 1, Item 3).

DISASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

7. Remove seal (Figure 1, Item 6) from inlet adapter (Figure 1, Item 5). Discard seal (Figure 1, Item 6).
8. Remove eight springs (Figure 1, Item 7) from inlet adapter (Figure 1, Item 5).
9. Remove o-ring (Figure 1, Item 8) from inside groove of inlet adapter (Figure 1, Item 5).
10. Discard o-ring (Figure 1, Item 8).
11. Remove o-ring (Figure 1, Item 9) from outer groove of inlet adapter (Figure 1, Item 5).
12. Discard o-ring (Figure 1, Item 9).
13. Rotate ball valve (Figure 1, Item 10) to the closed position and remove from inside coupling (Figure 1, Item 3).
14. Remove spring washer (Figure 1, Item 11), stop pin (Figure 1, Item 12) and o-ring (Figure 1, Item 13) from inside coupling (Figure 1, Item 3).
15. Discard o-ring (Figure 1, Item 13).
16. Remove seal (Figure 1, Item 14) from coupling (Figure 1, Item 3).
17. Discard seal (Figure 1, Item 14).
18. Remove o-ring (Figure 1, Item 15) from coupling (Figure 1, Item 3).
19. Discard o-ring (Figure 1, Item 15).
20. Remove screws (Figure 1, Item 16) from control arm (Figure 1, Item 17).
21. Remove control arm (Figure 1, Item 17) from coupling (Figure 1, Item 3).

N

If it is necessary to disassemble control arm (Figure 1, Item 17), perform the following steps:

a. Remove screw (Figure 1, Item 18) from control arm (Figure 1, Item 17).
b. Remove spring (Figure 1, Item 19) from control arm (Figure 1, Item 17).
c. Remove knob (Figure 1, Item 20) from control arm (Figure 1, Item 17).

22. Remove control arm shaft (Figure 1, Item 21) and o-ring (Figure 1, Item 22) from inside coupling (Figure 1, Item 3).
23. Discard o-ring (Figure 1, Item 22).
24. Remove seal (Figure 1, Item 23) from coupling (Figure 1, Item 3) interface.
25. Discard seal (Figure 1, Item 23).

N

If it is necessary to replace dust cap (Figure 1, Item 24), perform the following removal steps:

a. Cut cable (Figure 1, Item 25) or remove split ring (Figure 1, Item 26) from coupling (Figure 1, Item 3) and cable (Figure 1, Item 25).
b. Cut cable (Figure 1, Item 25) from dust cap (Figure 1, Item 24).
c. Remove cable (Figure 1, Item 25) and sleeve (Figure 1, Item 27).
d. Remove dust cap (Figure 1, Item 24) from coupling (Figure 1, Item 3).

DISASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

e. Remove seal (Figure 1, Item 28) from dust cap (Figure 1, Item 24).

f. Discard seal (Figure 1, Item 28).

N

If it is necessary to replace bumper (Figure 1, Item 29) or lugs (Figure 1, Item 30, 31), perform the following steps.

a. Remove bumper (Figure 1, Item 29) from coupling (Figure 1, Item 3).

b. Remove screws (Figure 1, Item 32) from coupling (Figure 1, Item 3).

c. Remove lug (Figure 1, Item 30) or lug (Figure 1, Item 31) from coupling (Figure 1, Item 3).

N

- Do not remove spring washer (Figure 1, Item 33), ball bearing (Figure 1, Item 34) or spring (Figure 1, Item 35). If replacement of ball bearing (Figure 1, Item 34) is required, then coupling (Figure 1, Item 3) must be replaced.

- If it is necessary to replace lockout pin (Figure 1, Item 36), perform the following removal steps.

  a. Remove screw (Figure 1, Item 37) from coupling (Figure 1, Item 3).

  b. Remove lockout pin (Figure 1, Item 36) from coupling (Figure 1, Item 3).

  c. Remove spring (Figure 1, Item 38) from coupling (Figure 1, Item 3).

26. Remove dust plug (Figure 1, Item 39) from inlet adapter (Figure 1, Item 5).

27. Remove gasket (Figure 1, Item 40) from dust plug (Figure 1, Item 39). Discard gasket (Figure 1, Item 40).

END OF TASK

REMOVE QUICK DISCONNECT COUPLING HALF

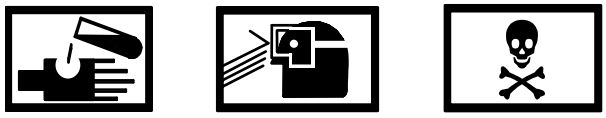
1. While holding the quick disconnect coupling half adapter (Figure 1, Item 5), turn the quick disconnect coupling half (Figure 1, Item 3) counterclockwise and pull to remove the quick disconnect coupling half (Figure 1, Item 3) from the quick disconnect coupling half adapter (Figure 1, Item 5).

2. Remove quick disconnect coupling half (Figure 1, Item 3).

END OF TASK

CLEAN 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign object enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or a medium bristle brush and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect bumper (Figure 1, Item 29) for cracks, tears or cuts. If cracks, tears or cuts are found, replace with a serviceable like item.
3. Inspect dust cap (Figure 1, Item 24) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

N

The purpose of ball bearing (Figure 1, Item 34) is to provide electrical continuity between mating surfaces.

4. Inspect ball bearing (Figure 1, Item 34) for damage. If damage is found, replace with serviceable like item.
5. Inspect control arm (Figure 1, Item 17) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

N

If it was necessary to replace lockout pin (Figure 1, Item 36), perform the following installation steps:

a. Install screw (Figure 1, Item 37) into coupling (Figure 1, Item 3).

b. Install spring (Figure 1, Item 38) into coupling (Figure 1, Item 3) and over screw (Figure 1, Item 37).

c. Install lockout pin (Figure 1, Item 36) into coupling (Figure 1, Item 3).

d. Tighten screw (Figure 1, Item 37) until ramp edge of lockout pin (Figure 1, Item 36) is even with or slightly below the adjacent ledge of coupling (Figure 1, Item 3).

N

If it was necessary to replace bumper (Figure 1, Item 29) or lugs (Figure 1, Item 30, 31), perform the following installation steps:

a. Position lug (Figure 1, Item 30) or lug (Figure 1, Item 31) in coupling (Figure 1, Item 3).

b. Install screws (Figure 1, Item 32) into coupling (Figure 1, Item 3).

c. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 32) to 6 in. lb (0.70 N-m).

d. Position bumper (Figure 1, Item 29) with thin lip seal end facing away from coupling (Figure 1, Item 3).

e. Install bumper (Figure 1, Item 29) on coupling (Figure 1, Item 3).

N

If it was necessary to replace dust cap (Figure 1, Item 24), perform the following installation steps:

a. Lightly lubricate new seal (Figure 1, Item 28) with petrolatum and install on dust cap (Figure 1, Item 24).

b. Loop one end of 18 in. cable (Figure 1, Item 25) through sleeve (Figure 1, Item 27), dust cap (Figure 1, Item 24) and back through sleeve (Figure 1, Item 27).

c. Using pliers, crimp sleeve (Figure 1, Item 27).

d. Loop other end of 18 in. cable (Figure 1, Item 25) through sleeve (Figure 1, Item 27), split ring (Figure 1, Item 26) and back through sleeve (Figure 1, Item 27).

e. Using pliers, crimp sleeve (Figure 1, Item 27).

f. Lightly lubricate new seal (Figure 1, Item 23) with petrolatum and install into coupling (Figure 1, Item 3) interface.

g. Install dust cap (Figure 1, Item 24) on coupling (Figure 1, Item 3).

1. Lightly lubricate new o-ring (Figure 1, Item 22) with petrolatum and install o-ring (Figure 1, Item 22) on control arm shaft (Figure 1, Item 21).

ASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

N

If it was necessary to disassemble control arm (Figure 1, Item 17), perform the following assembly steps:

a. Place spring (Figure 1, Item 19) on screw (Figure 1, Item 18).

b. Install screw (Figure 1, Item 18) into control arm (Figure 1, Item 17).

c. Install knob (Figure 1, Item 20) on control arm (Figure 1, Item 17).

d. Tighten screw (Figure 1, Item 18) hand tight.

2. Install control arm shaft (Figure 1, Item 21) inside coupling (Figure 1, Item 3).
3. Position control arm (Figure 1, Item 17) with holes on control arm shaft (Figure 1, Item 21).
4. Install screws (Figure 1, Item 16) through control arm (Figure 1, Item 17) and into control arm shaft (Figure 1, Item 21).
5. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 16) to 8 in. lb (0.90 N-m).
6. Lightly lubricate new o-ring (Figure 1, Item 15) with petrolatum and install o-ring (Figure 1, Item 15) in coupling (Figure 1, Item 3).
7. Install new seal (Figure 1, Item 14) into coupling (Figure 1, Item 3).
8. Lightly lubricate new o-ring (Figure 1, Item 13) with petrolatum and install o-ring (Figure 1, Item 13) in groove of stop pin (Figure 1, Item 12).
9. Install spring washer (Figure 1, Item 11) in groove of stop pin (Figure 1, Item 12).
10. Install stop pin (Figure 1, Item 12) inside coupling (Figure 1, Item 3).
11. Align slots in ball valve (Figure 1, Item 10) with tangs on control arm shaft (Figure 1, Item 21) and stop pin (Figure 1, Item 12).
12. Install ball valve (Figure 1, Item 10) in coupling (Figure 1, Item 3).
13. Rotate control arm (Figure 1, Item 17) to the open position to retain ball valve (Figure 1, Item 10) in place.

N

Test function of lockout pin (Figure 1, Item 36), if not removed from coupling (Figure 1, Item 3). Perform the following steps:

a. With ball valve (Figure 1, Item 10) in the open position, depress lockout pin (Figure 1, Item 36). If lockout pin (Figure 1, Item 36) cannot be depressed, then stop pin (Figure 1, Item 12) has been installed correctly.

b. With ball valve (Figure 1, Item 10) in the open position, depress lockout pin (Figure 1, Item 36). If lockout pin (Figure 1, Item 36) can be depressed, then stop pin (Figure 1, Item 12) has been installed incorrectly.

c. If stop pin (Figure 1, Item 12) was installed incorrectly, remove ball valve (Figure 1, Item 10) and reposition stop pin (Figure 1, Item 12).

ASSEMBLE 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

N

- During adjustment of lockout pin (Figure 1, Item 36), ensure that ball valve (Figure 1, Item 10) is securely seated at all times.
- Properly adjust lockout pin (Figure 1, Item 36) for control arm movement. Perform the following steps:
  a. Pull knob (Figure 1, Item 20) on control arm (Figure 1, Item 17) back and slowly rotate towards the closed position. If control arm (Figure 1, Item 17) cannot be rotated or is too tight, then lockout pin (Figure 1, Item 36) requires adjustment.
  b. Adjust lockout pin (Figure 1, Item 36) by loosening screw (Figure 1, Item 37) one-quarter turn at a time until control arm (Figure 1, Item 17) can be rotated freely.

14. Lightly lubricate new o-ring (Figure 1, Item 9) with petrolatum and install o-ring (Figure 1, Item 9) in second groove on outside of inlet adapter (Figure 1, Item 5).
15. Lightly lubricate new o-ring (Figure 1, Item 8) with petrolatum and install o-ring (Figure 1, Item 8) in inside groove of inlet adapter (Figure 1, Item 5).
16. Position eight springs (Figure 1, Item 7) in the eight holes on the inside of the inlet adapter (Figure 1, Item 5).
17. Install new seal (Figure 1, Item 6) in inside groove of inlet adapter (Figure 1, Item 5).
18. Position inlet adapter (Figure 1, Item 5) into coupling (Figure 1, Item 3) and press in to line up groove of inlet adapter (Figure 1, Item 5) with groove of coupling (Figure 1, Item 3).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for before assembly.

19. Hold coupling (Figure 1, Item 3) over cleaning cloth with screw hole up and insert ball bearings (Figure 1, Item 2) into hole.
20. Lightly lubricate new o-ring (Figure 1, Item 4) with petrolatum and install o-ring on screw (Figure 1, Item 1).
21. Install screw (Figure 1, Item 1) into coupling (Figure 1, Item 3).
22. Using torque wrench and screwdriver bit, torque screw (Figure 1, Item 1) to 25 in. lb (2.8 N-m).

END OF TASK

INSTALL QUICK DISCONNECT COUPLING HALF

1. Wrap threads of quick disconnect coupling half adapter (Figure 1, Item 5) with teflon tape.
2. While holding the quick disconnect coupling half adapter (Figure 1, Item 5), turn the quick disconnect coupling half (Figure 1, Item 3) clockwise to install quick disconnect coupling half (Figure 1, Item 3) on quick disconnect coupling half adapter (Figure 1, Item 5).
3. Tighten quick disconnect coupling half (Figure 1, Item 3).
4. Install new gasket (Figure 1, Item 40) into quick disconnect coupling half (Figure 1, Item 3).
5. Install dust plug (Figure 1, Item 39) into quick disconnect coupling half (Figure 1, Item 3).

END OF TASK

TEST REPAIRED 2 IN. FEMALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

1. Using the repaired (dry-break valve) coupling assembly and a similar (dry-break valve) coupling assembly, make a connection with the two (dry-break valve) coupling assemblies to ensure that the couplings will connect properly while in the closed position. If couplings will not connect properly, repair (dry-break valve) coupling assembly.
2. While the couplings are connected, rotate control arm (Figure 1, Item 17) to the open position and try to disconnect the couplings by rotating in a counterclockwise direction. If the couplings disconnect, then repair of the (dry-break valve) coupling assembly is required.
3. Close the control arm (Figure 1, Item 17) and disconnect the (dry-break valve) coupling assemblies by rotating the couplings in a counterclockwise direction.
4. Connect the repaired (dry-break valve) coupling assembly to a similar (dry-break valve) coupling assembly with the inlet capped.
5. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
6. With the control arm (Figure 1, Item 17) in the open position, apply pressure of 5 PSI (34.5 kPa) to the repaired (dry-break valve) coupling assembly.
7. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
8. Reduce pressure from the test system.
9. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
10. Close the control arm (Figure 1, Item 17) and disconnect the repaired (dry-break valve) coupling assembly from the similar (dry-break valve) coupling assembly by rotating the couplings in a counterclockwise direction.
11. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
12. With the control arm (Figure 1, Item 17) in the closed position, apply pressure of 5 PSI (34.5 kPa) to the repaired (dry-break valve) coupling assembly.
13. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
14. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
15. Reduce pressure from the test system, remove repaired (dry-break valve) coupling assembly from the test system and install dust cap (Figure 1, Item 24).
16. Install new gasket (Figure 1, Item 40) into dust cap (Figure 1, Item 39).
17. Install dust plug (Figure 1, Item 39) on inlet adapter (Figure 1, Item 5).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, MALE QUICK DISCONNECT 2 IN. X (DRY-BREAK VALVE) 2 IN.
PART NUMBER 64020FQ
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0–30 in. lb (WP 0162, Item 3)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Sealing compound (WP 0165, Item 11)
Gasket (2) (WP 0166, Item 36)
Petrolatum technical (WP 0165, Item 9)
O-ring (WP 0166, Item 50)
Seal, plain (2) (WP 0166, Item 23
Seal, plain (WP 0166, Item 24)
O-ring (WP 0166, Item 54)
O-ring (WP 0166, Item 58)
O-ring (2) (WP 0166, Item 51)
O-ring (WP 0166, Item 55)
Seal, plain (WP 0166, Item 25)
Gasket (WP 0166, Item 45)
Tape, teflon (WP 0165, Item 14)

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

N

- Repair is limited to replacement of parts found defective during inspection.
- Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), then screw (Figure 1, Item 1) should be replaced.

DISASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY-CONTINUED

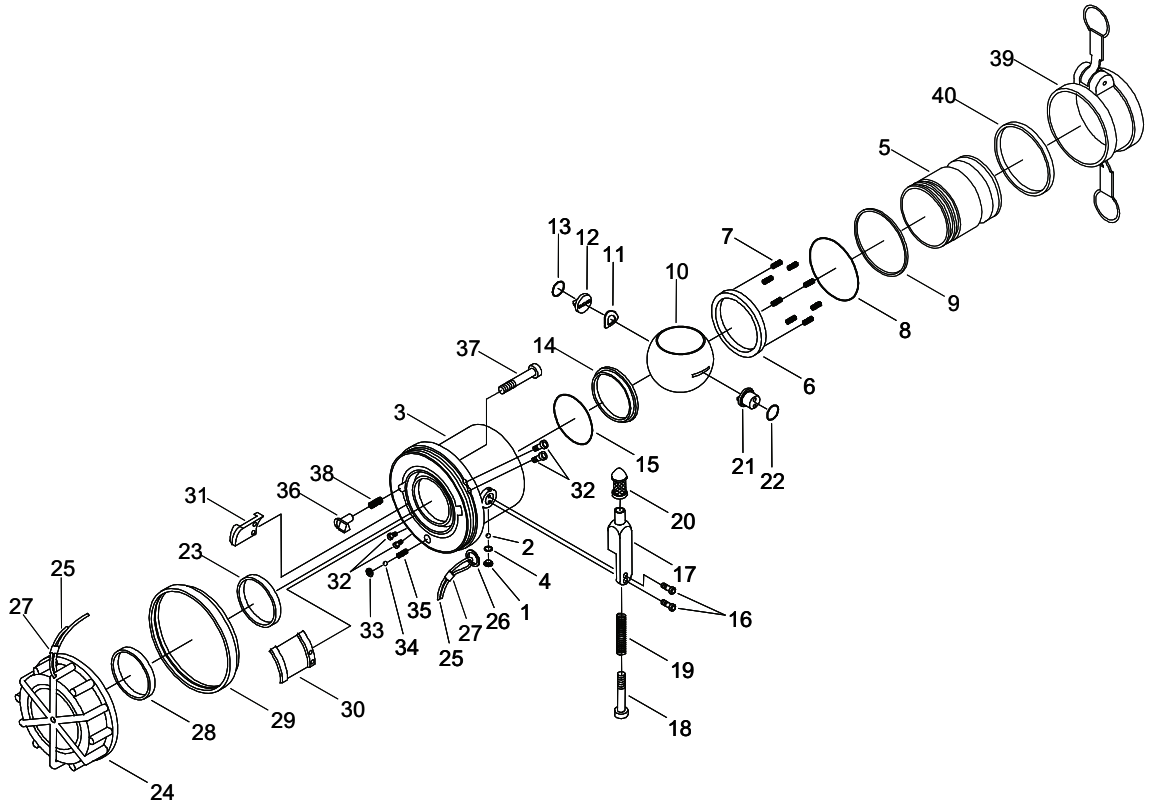


Figure 1. 2 In. Male Quick Disconnect x 2 In. Valved Dry-Break Adapter Assembly.

1. Using a torque wrench and screwdriver bit, check running torque on screw (Figure 1, Item 1). If running torque is less than 3.5 in. lb (0.45 N-m), discard screw (Figure 1, Item 1).

N

Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 2) inside coupling (Figure 1, Item 3).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 3).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for during disassembly.

5. Hold coupling with screw hole toward cleaning cloth and rotate inlet fitting to allow ball bearings (Figure 1, Item 2) to fall onto the cleaning cloth.
6. Remove quick disconnect coupling half adapter (Figure 1, Item 5) from coupling (Figure 1, Item 3).

DISASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY-CONTINUED

7. Remove seal (Figure 1, Item 6) from quick disconnect coupling half adapter (Figure 1, Item 5). Discard seal (Figure 1, Item 6).
8. Remove eight springs (Figure 1, Item 7) from quick disconnect coupling half adapter (Figure 1, Item 5).
9. Remove o-ring (Figure 1, Item 8) from inside groove of quick disconnect coupling half adapter (Figure 1, Item 5). Discard o-ring (Figure 1, Item 8).
10. Remove o-ring (Figure 1, Item 9) from outer groove of quick disconnect coupling half adapter (Figure 1, Item 5). Discard o-ring (Figure 1, Item 9).
11. Rotate ball valve (Figure 1, Item 10) to the closed position and remove from inside coupling (Figure 1, Item 3).
12. Remove spring washer (Figure 1, Item 11), stop pin (Figure 1, Item 12) and o-ring (Figure 1, Item 13) from inside coupling (Figure 1, Item 3).
13. Discard o-ring (Figure 1, Item 13).
14. Remove seal (Figure 1, Item 14) from coupling (Figure 1, Item 3).
15. Discard seal (Figure 1, Item 14).
16. Remove o-ring (Figure 1, Item 15) from coupling (Figure 1, Item 3).
17. Discard o-ring (Figure 1, Item 15).
18. Remove screws (Figure 1, Item 16) from control arm (Figure 1, Item 17).
19. Remove control arm (Figure 1, Item 17) from coupling (Figure 1, Item 3).

N

If it is necessary to disassemble control arm (Figure 1, Item 17), perform the following steps:

a. Remove screw (Figure 1, Item 18) from control arm (Figure 1, Item 17).
b. Remove spring (Figure 1, Item 19) from control arm (Figure 1, Item 17).
c. Remove knob (Figure 1, Item 20) from control arm (Figure 1, Item 17).

20. Remove control arm shaft (Figure 1, Item 21) and o-ring (Figure 1, Item 22) from inside coupling (Figure 1, Item 3).
21. Discard o-ring (Figure 1, Item 22).
22. Remove seal (Figure 1, Item 23) from coupling (Figure 1, Item 3) interface.
23. Discard seal (Figure 1, Item 23).

DISASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY-CONTINUED

N

If it is necessary to replace dust cap (Figure 1, Item 24), perform the following removal steps:

a. Cut cable (Figure 1, Item 25) or remove split ring (Figure 1, Item 26) from coupling (Figure 1, Item 3) and cable (Figure 1, Item 25).

b. Cut cable (Figure 1, Item 25) from dust cap (Figure 1, Item 24).

c. Remove cable (Figure 1, Item 25) and sleeve (Figure 1, Item 27).

d. Remove dust cap (Figure 1, Item 24) from coupling (Figure 1, Item 3).

e. Remove seal (Figure 1, Item 28) from dust cap (Figure 1, Item 24).

f. Discard seal (Figure 1, Item 28).

N

If it is necessary to replace bumper (Figure 1, Item 29) or lugs (Figure 1, Item 30, 31), perform the following steps:

a. Remove bumper (Figure 1, Item 29) from coupling (Figure 1, Item 3).

b. Remove screws (Figure 1, Item 32) from coupling (Figure 1, Item 3).

c. Remove lug (Figure 1, Item 30) or lug (Figure 1, Item 31) from coupling (Figure 1, Item 3).

N

- Do not remove spring washer (Figure 1, Item 33), ball bearing (Figure 1, Item 34) or spring (Figure 1, Item 35). If replacement of ball bearing (Figure 1, Item 34) is required, then coupling (Figure 1, Item 3) must be replaced.

- If it is necessary to replace lockout pin (Figure 1, Item 36), perform the following removal steps:

  a. Remove screw (Figure 1, Item 37) from coupling (Figure 1, Item 3).

  b. Remove lockout pin (Figure 1, Item 36) from coupling (Figure 1, Item 3).

  c. Remove spring (Figure 1, Item 38) from coupling (Figure 1, Item 3).

24. Remove dust cap (Figure 1, Item 39) from quick disconnect coupling half (Figure 1, Item 5).

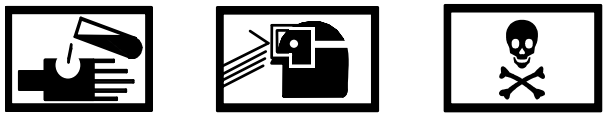
25. Remove gasket (Figure 1, Item 40) from quick disconnect coupling half (Figure 1, Item 5).

26. Discard gasket (Figure 1, Item 40).

END OF TASK

CLEAN 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign object enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect bumper (Figure 1, Item 29) for cracks, tears or cuts. If cracks, tears or cuts are found, replace with a serviceable like item.
3. Inspect dust cap (Figure 1, Item 24) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

N

The purpose of ball bearing (Figure 1, Item 34) is to provide electrical continuity between mating surfaces.

4. Inspect ball bearing (Figure 1, Item 34) for damage. If damage is found, replace with a serviceable like item.
5. Inspect control arm (Figure 1, Item 17) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

N

If it was necessary to replace lockout pin (Figure 1, Item 36), perform the following installation steps:

a. Install screw (Figure 1, Item 37) into coupling (Figure 1, Item 3).

b. Install spring (Figure 1, Item 38) into coupling (Figure 1, Item 3) and over screw (Figure 1, Item 37).

c. Install lockout pin (Figure 1, Item 36) into coupling (Figure 1, Item 3).

d. Tighten screw (Figure 1, Item 37) until ramp edge of lockout pin (Figure 1, Item 36) is even with or slightly below the adjacent ledge of coupling (Figure 1, Item 3).

N

If it was necessary to replace bumper (Figure 1, Item 29) or lugs (Figure 1, Item 30, 31), perform the following installation steps:

a. Position lug (Figure 1, Item 30) or lug (Figure 1, Item 31) in coupling (Figure 1, Item 3).

b. Install screws (Figure 1, Item 32) into coupling (Figure 1, Item 3).

c. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 32) to 6 in. lb (0.70 N-m).

d. Position bumper (Figure 1, Item 29) with thin lip seal end facing away from coupling (Figure 1, Item 3).

e. Install bumper (Figure 1, Item 29) on coupling (Figure 1, Item 3).

f. Lightly lubricate new seal (Figure 1, Item 28) with petrolatum and install into coupling (Figure 1, Item 3).

N

If it was necessary to replace dust cap (Figure 1, Item 24), perform the following installation steps.

a. Loop one end of 18 in. cable (Figure 1, Item 25) through sleeve (Figure 1, Item 27), dust cap (Figure 1, Item 24) and back through sleeve (Figure 1, Item 27).

b. Using pliers, crimp sleeve (Figure 1, Item 27).

c. Loop other end of cable (Figure 1, Item 25) through sleeve (Figure 1, Item 27), split ring (Figure 1, Item 26) and back through sleeve (Figure 1, Item 27).

d. Using pliers, crimp sleeve (Figure 1, Item 27).

e. Lightly lubricate new seal (Figure 1, Item 23) with petrolatum and install into coupling (Figure 1, Item 3) interface.

f. Install dust cap (Figure 1, Item 24) on coupling (Figure 1, Item 3).

1. Lightly lubricate new o-ring (Figure 1, Item 22) with petrolatum and install new o-ring (Figure 1, Item 22) on control arm shaft (Figure 1, Item 21).

ASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

N

If it was necessary to disassemble control arm (Figure 1, Item 17), perform the following assembly steps:

a. Place spring (Figure 1, Item 19) on screw (Figure 1, Item 18).

b. Install screw (Figure 1, Item 18) into control arm (Figure 1, Item 17).

c. Install knob (Figure 1, Item 20) on control arm (Figure 1, Item 17).

d. Tighten screw (Figure 1, Item 18) hand tight.

2. Install control arm shaft (Figure 1, Item 21) inside coupling (Figure 1, Item 3).
3. Position control arm (Figure 1, Item 17) with holes on control arm shaft (Figure 1, Item 21).
4. Install screws (Figure 1, Item 16) through control arm (Figure 1, Item 17) and into control arm shaft (Figure 1, Item 21).
5. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 16) to 8 in. lb (0.90 N-m).
6. Lightly lubricate new o-ring (Figure 1, Item 15) with petrolatum and install new o-ring (Figure 1, Item 15) in coupling (Figure 1, Item 3).
7. Install new seal (Figure 1, Item 14) into coupling (Figure 1, Item 3).
8. Lightly lubricate new o-ring (Figure 1, Item 13) with petrolatum and install new o-ring (Figure 1, Item 13) in groove of stop pin (Figure 1, Item 12).
9. Install spring washer (Figure 1, Item 11) in groove of stop pin (Figure 1, Item 12).
10. Install stop pin (Figure 1, Item 12) inside coupling (Figure 1, Item 3).
11. Align slots in ball valve (Figure 1, Item 10) with tangs on control arm shaft (Figure 1, Item 21) and stop pin (Figure 1, Item 12).
12. Install ball valve (Figure 1, Item 10) in coupling (Figure 1, Item 3).
13. Rotate control arm (Figure 1, Item 17) to the open position to retain ball valve (Figure 1, Item 10) in place.

N

Test function of lockout pin (Figure 1, Item 36), if not removed from coupling (Figure 1, Item 3). Perform the following steps:

a. With ball valve (Figure 1, Item 10) in the open position, depress lockout pin (Figure 1, Item 36). If lockout pin (Figure 1, Item 36) cannot be depressed, then stop pin (Figure 1, Item 12) has been installed correctly.

b. With ball valve (Figure 1, Item 10) in the open position, depress lockout pin (Figure 1, Item 36). If lockout pin (Figure 1, Item 36) can be depressed, then stop pin (Figure 1, Item 12) has been installed incorrectly.

c. If stop pin (Figure 1, Item 12) was installed incorrectly, remove ball valve (Figure 1, Item 10) and reposition stop pin (Figure 1, Item 12).

ASSEMBLE 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY – CONTINUED

N

During adjustment of lockout pin (Figure 1, Item 36), ensure that ball valve (Figure 1, Item 10) is securely seated at all times.

Adjust lockout pin (Figure 1, Item 36) for control arm movement.

a. Pull knob (Figure 1, Item 20) on control arm (Figure 1, Item 17) back and slowly rotate towards the closed position. If control arm (Figure 1, Item 17) cannot be rotated or is too tight, then lockout pin (Figure 1, Item 36) requires adjustment.

b. Adjust lockout pin (Figure 1, Item 36) by loosening screw (Figure 1, Item 37) one-quarter turn at a time until control arm (Figure 1, Item 17) can be rotated freely.

14. Lightly lubricate new o-ring (Figure 1, Item 9) with petrolatum and install new o-ring (Figure 1, Item 9) in second groove on outside of quick disconnect coupling half adapter Figure 1, Item 5).
15. Lightly lubricate new o-ring (Figure 1, Item 8) with petrolatum and install new o-ring (Figure 1, Item 8) in inside groove of quick disconnect coupling half adapter (Figure 1, Item 5).
16. Position eight springs (Figure 1, Item 7) in the eight holes on the inside of the quick disconnects coupling half adapter (Figure 1, Item 5).
17. Install new seal (Figure 1, Item 6) in inside groove of quick disconnect coupling half adapter (Figure 1, Item 5).
18. Position quick disconnect coupling half adapter (Figure 1, Item 5) into coupling (Figure 1, Item 3) and press in to line up groove of quick disconnect coupling half adapter (Figure 1, Item 5) with groove of coupling (Figure 1, Item 3).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for before assembly.

19. Hold coupling (Figure 1, Item 3) over cleaning cloth with screw hole up and insert ball bearings (Figure 1, Item 2) into hole.
20. Lightly lubricate new o-ring (Figure 1, Item 4) with petrolatum and install new o-ring on screw (Figure 1, Item 1).
21. Install screw (Figure 1, Item 1) into coupling (Figure 1, Item 3).
22. Using torque wrench and screwdriver bit, torque screw (Figure 1, Item 1) to 25 in. lb (2.8 N-m).

END OF TASK

TEST REPAIRED 2 IN. MALE QUICK DISCONNECT X 2 IN. (DRY-BREAK VALVE) ADAPTER ASSEMBLY

1. Using the repaired (dry-break valve) coupling assembly and a similar (dry-break valve) coupling assembly, make a connection with the two (dry-break valve) coupling assemblies to ensure that the couplings will connect properly while in the closed position. If couplings will not connect properly, repair (dry-break valve) coupling assembly.
2. While the couplings are connected, rotate control arm (Figure 1, Item 17) to the open position and try to disconnect the couplings by rotating in a counterclockwise direction. If the couplings disconnect, then repair of the (dry-break valve) coupling assembly is required.
3. Close the control arm (Figure 1, Item 17) and disconnect the (dry-break valve) coupling assemblies by rotating the couplings in a counterclockwise direction.
4. Connect the repaired (dry-break valve) coupling assembly to a similar (dry-break valve) coupling assembly with the inlet capped.
5. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
6. With the control arm (Figure 1, Item 17) in the open position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
7. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
8. Reduce pressure from the test system.
9. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
10. Close the control arm (Figure 1, Item 17) and disconnect the repaired (dry-break valve) coupling assembly from the similar (dry-break valve) coupling assembly by rotating the couplings in a counterclockwise direction.
11. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
12. With the control arm (Figure 1, Item 17) in the closed position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
13. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
14. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
15. Reduce pressure from the test system, remove repaired (dry-break valve) coupling assembly from the test system and install dust cap (Figure 1, Item 24).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, FEMALE 4 IN. X UNISEX DRY-BREAK 3 IN.
PART NUMBER 64031MQ
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0–30 in. lb (WP 0162, Item 3)
Wrench, torque, 0–150 in. lb (WP 0162, Item 5)
Apron, utility (WP 0165, Item 2)
Goggles, industrial (WP 0165, Item 17)
Gloves, rubber, industrial (WP 0165, Item 18)
Wrench, pipe (WP 0162, Item 12)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Petrolatum technical (WP 0165, Item 9)
Tape, teflon (WP 0165, Item 14)
O-ring (WP 0166, Item 48)
O-ring (2) (WP 0166, Item 49)
O-ring (2) (WP 0166, Item 52)
O-ring (WP 0166, Item 60)
Seal (WP 0166, Item 17)
Seal (2) (WP 0166, Item 18)
Gasket (WP 0166, Item 46)
Bushing (3) (WP 0166, item 10)
Bushing (WP 0166, Item 11)

Equipment Conditions

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY – CONTINUED

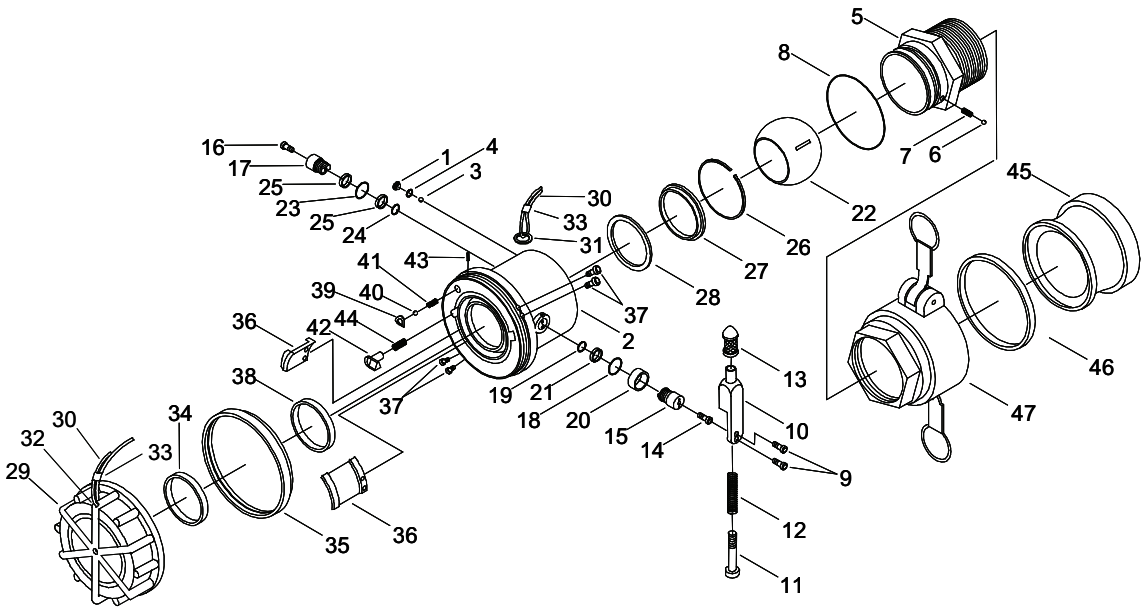


Figure 1. 4 In. Female X 3 In. Unisex Adapter.

N

Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), then screw (Figure 1, Item 1) should be replaced.

1. While removing screw (Figure 1, Item 1) from coupling (Figure 1, Item 2), use a torque wrench and screwdriver bit to check running torque. If running torque is less than 9.5 in. lb (1.07 N-m), discard screw (Figure 1, Item 1).

N

Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 3) inside coupling (Figure 1, Item 2).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 2).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

Ensure all 41 ball bearings (Figure 1, Item 3) are accounted for during disassembly.

5. Hold coupling (Figure 1, Item 2) with screw hole toward cleaning cloth and rotate inlet fitting to allow ball bearings (Figure 1, Item 3) to fall onto the cleaning cloth.

DISASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY – CONTINUED

N

When removing inlet adapter (Figure 1, Item 5), retain ball bearing (Figure 1, Item 6) and spring (Figure 1, Item 7). Place cleaning cloth around the inlet adapter (Figure 1, Item 2) to prevent loss.

6. Remove inlet adapter (Figure 1, Item 5) from coupling (Figure 1, Item 2).
7. Remove o-ring (Figure 1, Item 8) from outer groove of inlet adapter (Figure 1, Item 5).
8. Discard o-ring (Figure 1, Item 8).
9. Remove screws (Figure 1, Item 9) from control arm (Figure 1, Item 10).
10. Remove control arm (Figure 1, Item 10) from coupling (Figure 1, Item 2).

N

If it is necessary to disassemble control arm (Figure 1, Item 10), perform the following steps.

a. Remove screw (Figure 1, Item 11) from control arm (Figure 1, Item 10).
b. Remove spring (Figure 1, Item 12) from control arm (Figure 1, Item 10).
c. Remove knob (Figure 1, Item 13) from control arm (Figure 1, Item 10).

11. Remove screw (Figure 1 item 14) from upper shaft (Figure 1, Item 15).
12. Remove screw (Figure 1 item 16) from lower shaft (Figure 1, Item 17).
13. Using one screw (Figure 1, Item 9), screw into end of upper shaft (Figure 1, Item 15) and remove upper shaft (Figure 1, Item 15) from coupling (Figure 1, Item 2).
14. Remove o-rings (Figure 1, Item 18, 19) from upper shaft (Figure 1, Item 15).
15. Discard o-rings (Figure 1, Item 18, 19).
16. Remove bushings (Figure 1, Item 20, 21) from upper shaft (Figure 1, Item 15).
17. Discard bushings (Figure 1, Item 20, 21).
18. Rotate ball valve (Figure 1, Item 22) to the open position and remove from inside coupling (Figure 1, Item 2).
19. Push out lower shaft (Figure 1, Item 17) from inside coupling (Figure 1, Item 2).
20. Remove o-rings (Figure 1, Item 23, 24) from lower shaft (Figure 1, Item 17).
21. Discard o-rings (Figure 1, Item 23, 24).
22. Remove bushings (Figure 1, Item 25) from lower shaft (Figure 1, Item 17).
23. Discard bushings (Figure 1, Item 25).
24. Remove retaining ring (Figure 1, Item 26) from coupling (Figure 1, Item 2).
25. Remove seal retainer (Figure 1, Item 27) from coupling (Figure 1, Item 2).
26. Remove seal (Figure 1, Item 28) from coupling (Figure 1, Item 2).
27. Discard seal (Figure 1, Item 28).

DISASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY – CONTINUED

N

If it is necessary to replace dust cap (Figure 1, Item 29), perform the following removal steps:

a. Cut cable (Figure 1, Item 30) or remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 2) and cable (Figure 1, Item 30).

b. Cut cable (Figure 1, Item 30) or remove split ring (Figure 1, Item 32) from dust cap (Figure 1, Item 29).

c. Remove cable (Figure 1, Item 30) and sleeve (Figure 1, Item 33).

d. Remove seal (Figure 1, Item 34) from dust cap (Figure 1, Item 29).

e. Discard seal (Figure 1, Item 34).

N

If it is necessary to replace bumper (Figure 1, Item 35) or lugs (Figure 1, Item 36), perform the following steps:

a. Remove bumper (Figure 1, Item 35) from coupling (Figure 1, Item 2).

b. Remove screws (Figure 1, Item 37) from coupling (Figure 1, Item 2).

c. Remove lugs (Figure 1, Item 36) from coupling (Figure 1, Item 2).

d. Remove seal (Figure 1, Item 38) from coupling (Figure 1, Item 2).

e. Discard seal (Figure 1, Item 38).

N

Do not remove spring washer (Figure 1, Item 39), ball bearing (Figure 1, Item 40) or spring (Figure 1, Item 41). If replacement of ball bearing (Figure 1, Item 40) is required, then coupling (Figure 1, Item 2) must be replaced.

If it is necessary to replace lockout pin (Figure 1, Item 42), perform the following removal steps:

a. Remove spring pin (Figure 1, Item 43) from coupling (Figure 1, Item 2).

b. Remove lockout pin (Figure 1, Item 42) from coupling (Figure 1, Item 2).

c. Remove spring (Figure 1, Item 44) from coupling (Figure 1, Item 2).

28. Remove dust plug (Figure 1, Item 45) from camlock connector (Figure 1, Item 47).

29. Remove gasket (Figure 1, Item 46) from camlock connector (Figure 1, Item 47).

30. Discard gasket (Figure 1, Item 46).

N

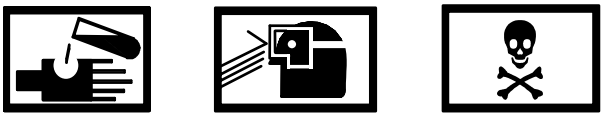
A vise may be needed to remove inlet adapter from camlock connector.

31. Using pipe wrench, remove the inlet adapter (Figure 1, Item 5), from the camlock connector (Figure 1, Item 47).

END OF TASK

CLEAN 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or a medium bristle brush and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect bumper (Figure 1, Item 35) for cracks, tears or cuts. If cracks, tears or cuts are found, replace with a serviceable like item.
3. Inspect dust cap (Figure 1, Item 29) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.
4. Inspect dust plug (Figure 1, Item 45) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.

N

The purpose of ball bearing (Figure 1, Item 40) is to provide electrical continuity between mating surfaces.

5. Inspect spring loaded ball bearing (Figure 1, Item 40) located in face of coupling for damage. Push the ball bearing (Figure 1, Item 40) in and ensure it pops back into place. If damage is found or ball bearing (Figure 1, Item 40) does not pop back into place, replace coupling (Figure 1, Item 2).
6. Inspect control arm (Figure 1, Item 10) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY

1. Install new gasket (Figure 1, Item 46) in camlock connector (Figure 1, Item 47).
2. Install dust plug (Figure 1, Item 45) in camlock connector (Figure 1, Item 47).

N

A vise may be needed to install inlet adapter to camlock connector.

3. Wrap threads of inlet adapter (Figure 1, Item 5) with teflon tape.
4. While holding the inlet adapter (Figure 1, Item 5), turn the camlock connector (Figure 1, Item 47) clockwise to install camlock connector (Figure 1, Item 47) on inlet adapter (Figure 1, Item 5).
5. Tighten camlock connector (Figure 1, Item 47).

N

If it was necessary to replace lockout pin (Figure 1, Item 42), perform the following installation steps:

a. Install spring (Figure 1, Item 44) into coupling (Figure 1, Item 2).

b. Install lockout pin (Figure 1, Item 42) into coupling (Figure 1, Item 2).

c. Install spring pin (Figure 1, Item 43) into coupling (Figure 1, Item 2).

N

If it was necessary to replace bumper (Figure 1, Item 35) or lugs (Figure 1, Item 36), perform the following 5 installation steps:

a. Position lugs (Figure 1, Item 36) in coupling (Figure 1, Item 2).

b. Install screws (Figure 1, Item 37) into coupling (Figure 1, Item 2).

c. Install new seal (Figure 1, Item 38) into coupling (Figure 1, Item 2) interface.

d. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 37) to 6 in. lb (0.70 n-m).

e. Position bumper (Figure 1, Item 35) with thin lip seal end facing away from coupling (Figure 1, Item 2).

f. Install bumper (Figure 1, Item 35) on coupling (Figure 1, Item 2).

N

If it was necessary to replace dust cap (Figure 1, Item 29), perform the following installation steps:

a. Install new seal (Figure 1, Item 34) on dust cap (Figure 1, Item 29).

b. Loop one end of 18 in. cable (Figure 1, Item 30) through sleeve (Figure 1, Item 33), dust cap (Figure 1, Item 29) and back through sleeve (Figure 1, Item 33).

c. Using pliers, crimp sleeve (Figure 1, Item 33).

d. Loop other end of 18 in. cable (Figure 1, Item 30) through sleeve (Figure 1, Item 33), split ring (Figure 1, Item 31) and back through sleeve (Figure 1, Item 33).

e. Using pliers, crimp sleeve (Figure 1, Item 33).

ASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY -CONTINUED

6. Install new seal (Figure 1, Item 28) in coupling (Figure 1, Item 2).
7. Install seal retainer (Figure 1, Item 27) in coupling (Figure 1, Item 2).
8. Install retaining ring (Figure 1, Item 26) in coupling (Figure 1, Item 2).
9. Install new bushings (Figure 1, Item 25) on lower shaft (Figure 1, Item 17).
10. Lightly lubricate new o-rings (Figure 1, Item 23, 24) with petrolatum and install new o-rings (Figure 1, Item 23, 24) on lower shaft (Figure 1, Item 17).
11. Position ball valve (Figure 1, Item 22) in the open position and install inside coupling (Figure 1, Item 2).
12. Install lower shaft (Figure 1, Item 17) inside coupling (Figure 1, Item 2).
13. Install screw (Figure 1, Item 16) on lower shaft (Figure 1, Item 17).
14. Install new bushings (Figure 1, Item 20, 21) on upper shaft (Figure 1, Item 15).
15. Lightly lubricate new o-rings (Figure 1, Item 18, 19) with petrolatum and install new o-rings (Figure 1, Item 18, 19) on upper shaft (Figure 1, Item 15).
16. Install upper shaft (Figure 1, Item 15) in coupling (Figure 1, Item 2).
17. Install screw (Figure 1, Item 14) on upper shaft (Figure 1, Item 15).

N

If it was necessary to disassemble control arm (Figure 1, Item 10), perform the following assembly steps:

a. Place spring (Figure 1, Item 12) on screw (Figure 1, Item 11).
b. Install screw (Figure 1, Item 11) into control arm (Figure 1, Item 10).
c. Install knob (Figure 1, Item 13) on control arm (Figure 1, Item 10).
d. Tighten screw (Figure 1, Item 11) hand tight.
e. Position control arm (Figure 1, Item 10) with holes lined up on upper shaft (Figure 1, Item 15).
f. Install screws (Figure 1, Item 9) through control arm (Figure 1, Item 10) and into upper shaft (Figure 1, Item 15).
g. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 9) to 8 in. lb (0.90 N-m).

18. Lightly lubricate new o-ring (Figure 1, Item 8) with petrolatum and install new o-ring (Figure 1, Item 8) in outer groove of inlet adapter (Figure 1, Item 5).

N

When installing inlet adapter (Figure 1, Item 5), ensure ball bearing (Figure 1, Item 6) and spring (Figure 1, Item 7) are in place.

19. Install inlet adapter (Figure 1, Item 5) into coupling (Figure 1, Item 2).

ASSEMBLE 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY -CONTINUED

N

Ensure all 41 ball bearings (Figure 1, Item 3) are accounted for before assembly.

20. Hold coupling (Figure 1, Item 2) over cleaning cloth with screw hole up, insert ball bearings (Figure 1, Item 3) into hole.
21. Lightly lubricate new o-ring (Figure 1, Item 4) with petrolatum and install new o-ring (Figure 1, Item 4) on screw (Figure 1, Item 1).
22. Install screw (Figure 1, Item 1) into coupling (Figure 1, Item 2).
23. Using torque wrench and screwdriver bit, torque screw (Figure 1, Item 1) to 72–80 in. lb (8.13–9.04 N-m).

END OF TASK

TEST REPAIRED 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY

1. Using the repaired (dry-break valve) coupling assembly and a similar (dry-break valve) coupling assembly, make a connection with the two (dry-break valve) coupling assemblies to ensure that the couplings will connect properly while in the closed position. If couplings will not connect properly, repair (dry-break valve) coupling assembly.
2. While the couplings are connected, rotate control arm (Figure 1, Item 10) to the open position and try to disconnect the couplings by rotating in a counterclockwise direction. If the couplings disconnect, then repair of the (dry-break valve) coupling assembly is required.
3. Close the control arm (Figure 1, Item 10) and disconnect the (dry-break valve) coupling assemblies by rotating the couplings in a counterclockwise direction.
4. Connect the repaired (dry-break valve) coupling assembly to a similar (dry-break valve) coupling assembly with the inlet capped.
5. Connect a fluid pressure source capable of 100 PSI (689.5 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
6. With the control arm (Figure 1, Item 10) in the open position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
7. Increase pressure to 100 PSI (689.5 kPa) to the repaired (dry-break valve) coupling assembly.
8. Reduce pressure from the test system.
9. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
10. Close the control arm (Figure 1, Item 10) and disconnect the repaired (dry-break valve) coupling assembly from the similar (dry-break valve) coupling assembly by rotating the couplings in a counterclockwise direction.
11. Connect a fluid pressure source capable of 100 PSI (689.5 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
12. With the control arm (Figure 1, Item 10) in the closed position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
13. Increase pressure to 100 PSI (689.5 kPa) to the repaired (dry-break valve) coupling assembly.

TEST REPAIRED 4 IN. FEMALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY - CONTINUED

14. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
15. Reduce pressure from the test system, remove repaired (dry-break valve) coupling assembly from the test system and install dust cap (Figure 1, Item 29).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ADAPTER ASSEMBLY, MALE 4 IN. X UNISEX DRY-BREAK 3 IN.
PART NUMBER 64031PQ
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0-30 in. lb (WP 0162, Item 3)
Wrench, torque, 0-150 in. lb (WP 0162, Item 5)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Apron, utility (WP 0165, Item 2)

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Petrolatum technical (WP 0165, Item 9)
O-ring (WP 0166, Item 48)
O-ring (WP 0166, Item 49)
O-ring (WP 0166, Item 52)
O-ring (WP 0166, Item 60)
Seal (WP 0166, Item 17)
Seal (2) (WP 0166, Item 18)
Gasket (WP 0166, Item 46)
Bushing (3) (WP 0166, Item 10)
Bushing (WP 0166, Item 11)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER – CONTINUED

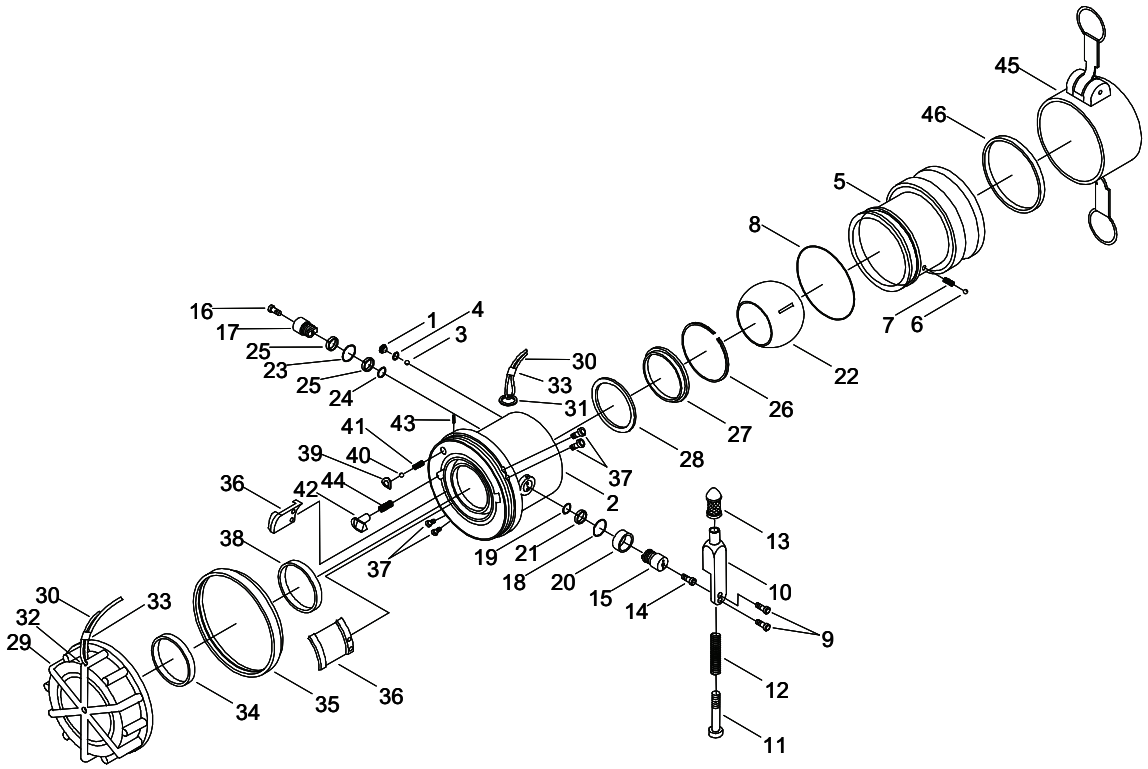


Figure 1. 4 In. Male X 3 In. Unisex Adapter.

N

Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), them screw (Figure 1, Item 1) should be replaced.

1. While removing screw (Figure 1, Item 1) from coupling (Figure 1, Item 2) use a torque wrench and screwdriver bit to check running torque. If running torque is less than 9.5 in. lb (1.07 N-m), discard screw (Figure 1, Item 1).

N

Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 3) inside coupling (Figure 1, Item 2).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 2).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

Ensure all 41 ball bearings (Figure 1, Item 3) are accounted for during disassembly.

5. Hold coupling (Figure 1, Item 2) with screw hole toward cleaning cloth and rotate inlet fitting to allow ball bearings (Figure 1, Item 3) to fall onto the cleaning cloth.

DISASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER – CONTINUED

N

When removing inlet adapter (Figure 1, Item 5) retain ball bearing (Figure 1, Item 6) and spring (Figure 1, Item 7). Place cleaning cloth around inlet adapter (Figure 1, Item 2) to prevent loss.

6. Remove inlet adapter (Figure 1, Item 5) from coupling (Figure 1, Item 2).
7. Remove o-ring (Figure 1, Item 8) from outer groove of inlet adapter (Figure 1, Item 5).
8. Discard o-ring (Figure 1, Item 8).
9. Remove screws (Figure 1, Item 9) from control arm (Figure 1, Item 10).
10. .Remove control arm (Figure 1, Item 10) from coupling (Figure 1, Item 2).

N

If it is necessary to disassemble control arm (Figure 1, Item 10), perform the following steps

a. Remove screw (Figure 1, Item 11) from control arm (Figure 1, Item 10).

b. Remove spring (Figure 1, Item 12) from control arm (Figure 1, Item 10)

c. Remove knob (Figure 1, Item 13) from control arm (Figure 1, Item 10).

11. Remove screw (Figure 1, Item 14) from upper shaft (Figure 1, Item 15).
12. Remove screw (Figure 1, Item 16) from lower shaft (Figure 1, Item 17).
13. Using one screw (Figure 1, Item 9), screw into end of upper shaft (Figure 1, Item 15) and remove upper shaft (Figure 1, Item 15) from coupling (Figure 1, Item 2).
14. Remove o-rings (Figure 1, Item 18, 19) from upper shaft (Figure 1, Item 15).
15. Discard o-rings (Figure 1, Item 18, 19).
16. Remove bushings (Figure 1, Item 20, 21) from upper shaft (Figure 1, Item 15).
17. Discards bushings (Figure 1, Item 20, 21).
18. Rotate ball valve (Figure 1, Item 22) to the open position and remove from inside coupling (Figure 1, Item 2).
19. Push out lower shaft (Figure 1, Item 17) from inside coupling (Figure 1, Item 2).
20. Remove o-rings (Figure 1, Item 23, 24) from lower shaft (Figure 1, Item 17).
21. Discards o-rings (Figure 1, Item 23, 24).
22. Remove bushings (Figure 1, Item 25) from lower shaft (Figure 1, Item 17).
23. Discard bushings (Figure 1, Item 25).
24. Remove retaining ring (Figure 1, Item 26) from coupling (Figure 1, Item 2).
25. Remove seal retainer (Figure 1, Item 27) from coupling (Figure 1, Item 2).
26. Remove seal (Figure 1, Item 28) from coupling (Figure 1, Item 2).
27. Discard seal (Figure 1, Item 28).

DISASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER – CONTINUED

N

If it is necessary to replace dust cap (Figure 1, Item 29), perform the following removal steps:

a. Cut cable (Figure 1, Item 30) or remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 2) and cable (Figure 1, Item 30).

b. Cut cable (Figure 1, Item 30) or remove split ring (Figure 1, Item 32) from dust cap (Figure 1, Item 29).

c. Remove cable (Figure 1, Item 30) and sleeve (Figure 1, Item 33).

d. Remove seal (Figure 1, Item 34) from dust cap (Figure 1, Item 29).

e. Discard seal (Figure 1, Item 34).

N

If it is necessary to replace bumper (Figure 1, Item 35) or lugs (Figure 1, Item 36), perform the following steps:

a. Remove bumper (Figure 1, Item 35) from coupling (Figure 1, Item 2).

b. Remove screws (Figure 1, Item 37) from coupling (Figure 1, Item 2).

c. Remove lugs (Figure 1, Item 36) from coupling (Figure 1, Item 2).

d. Remove seal (Figure 1, Item 38) from coupling (Figure 1, Item 2).

e. Discard seal (Figure 1, Item 38).

N

- Do not remove spring washer (Figure 1, Item 39) ball bearing (Figure 1, Item 40) or spring (Figure 1, Item 41). If replacement of ball bearing (Figure 1, Item 40) is required, then coupling (Figure 1, Item 2) must be replaced.
- If it is necessary to replace lockout pin (Figure 1, Item 42), perform the following removal steps:
  a. Remove spring pin (Figure 1, Item 43) from coupling (Figure 1, Item 2).
  b. Remove lockout pin (Figure 1, Item 42) from coupling (Figure 1, Item 2).
  c. Remove spring (Figure 1, Item 44) from coupling (Figure 1, Item 2).

28. Remove dust cap (Figure 1, Item 45) from inlet adapter (Figure 1, Item 5).

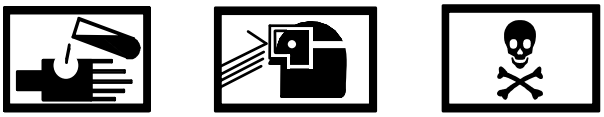
29. Remove gasket (Figure 1, Item 46) from dust cap (Figure 1, Item 45).

30. Discard gasket (Figure 1, Item 46).

END OF TASK

CLEAN 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or a medium bristle brush and solvent cleaning compound.

2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.

2. Inspect bumper (Figure 1, Item 35) for cracks, tears or cuts. If cracks, tears or cuts are found, replace with a serviceable like item.

3. Inspect dust cap (Figure 1, Item 29) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.

4. Inspect dust cap (Figure 1, Item 45) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.

N

The purpose of ball bearing (Figure 1, Item 40) is to provide electrical continuity between mating surfaces.

5. Inspect spring loaded ball bearing (Figure 1, Item 40) located in face of coupling for damage. Push the ball bearing (Figure 1, Item 40) in and ensure it pops back into place. If damage is found or ball bearing (Figure 1, Item 40) does not pop back into place, replace coupling (Figure 1, Item 2).

6. Inspect control arm (Figure 1, Item 10) for cracks or damage. If cracks or damage are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY

1. Install new gasket (Figure 1, Item 46) in dust cap (Figure 1, Item 45).
2. Install dust cap (Figure 1, Item 45) on inlet adapter (Figure 1, Item 5).

N

If it was necessary to replace lockout pin (Figure 1, Item 42), perform the following installation steps:

a. Install spring (Figure 1, Item 44) into coupling (Figure 1, Item 2).

b. Install lockout pin (Figure 1, Item 42) into coupling (Figure 1, Item 2).

c. Install spring pin (Figure 1, Item 43) into coupling (Figure 1, Item 2).

N

If it was necessary to replace bumper (Figure 1, Item 35) or lugs (Figure 1, Item 36), perform the following installation steps:

a. Position lugs (Figure 1, Item 36) in coupling (Figure 1, Item 2).

b. Install screws (Figure 1, Item 37) into coupling (Figure 1, Item 2).

c. Install new seal (Figure 1, Item 38) into coupling (Figure 1, Item 2) interface.

d. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 37) to 6 in. lb (0.70 N-m).

e. Position bumper (Figure 1, Item 35) with thin lip seal end facing away from coupling (Figure 1, Item 2).

f. Install bumper (Figure 1, Item 35) on coupling (Figure 1, Item 2).

N

If it was necessary to replace dust cap (Figure 1, Item 29), perform the following 5 installation steps:

a. Install new seal (Figure 1, Item 34) on dust cap (Figure 1, Item 29).

b. Loop one end of 18 in. cable (Figure 1, Item 30) through sleeve (Figure 1, Item 33), dust cap (Figure 1, Item 29) and back through sleeve (Figure 1, Item 33).

c. Using pliers, crimp sleeve (Figure 1, Item 33).

d. Loop other end of 18 in. cable (Figure 1, Item 30) through sleeve (Figure 1, Item 33), split ring (Figure 1, Item 31) and back through sleeve (Figure 1, Item 33).

e. Using pliers, crimp sleeve (Figure 1, Item 33).

3. Install new seal (Figure 1, Item 28) in coupling (Figure 1, Item 2).
4. Install seal retainer (Figure 1, Item 27) in coupling (Figure 1, Item 2).
5. Install retaining ring (Figure 1, Item 26) in coupling (Figure 1, Item 2).
6. Install new bushings (Figure 1, Item 25) on lower shaft (Figure 1, Item 17).

ASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY - CONTINUED

7. Lightly lubricate new o-rings (Figure 1, Item 23, 24) with petrolatum and install new o-rings (Figure 1, Item 23, 24) on lower shaft (Figure 1, Item 17).
8. Position ball valve (Figure 1, Item 22) in the open position and install inside coupling (Figure 1, Item 2).
9. Install lower shaft (Figure 1, Item 17) inside coupling (Figure 1, Item 2).
10. Install screw (Figure 1, Item 16) on lower shaft (Figure 1, Item 17).
11. Install new bushings (Figure 1, Item 20, 21) on upper shaft (Figure 1, Item 15).
12. Lightly lubricate new o-rings (Figure 1, Item 18, 19) with petrolatum and install new o-rings (Figure 1, Item 18, 19) on upper shaft (Figure 1, Item 15).
13. Install upper shaft (Figure 1, Item 15) in coupling (Figure 1, Item 2).
14. Install screw (Figure 1, Item 14) on upper shaft (Figure 1, Item 15).

N

If it was necessary to disassemble control arm (Figure 1, Item 10), perform the following assembly steps.

a. Place spring (Figure 1, Item 12) on screw (Figure 1, Item 11).
b. Install screw (Figure 1, Item 11) into control arm (Figure 1, Item 10).
c. Install knob (Figure 1, Item 13) on control arm (Figure 1, Item 10).
d. Tighten screw (Figure 1, Item 11) hand tight.
e. Position control arm (Figure 1, Item 10) with holes lined up on upper shaft (Figure 1, Item 15).
f. Install screws (Figure 1, Item 9) through control arm (Figure 1, Item 10) and into upper shaft (Figure 1, Item 15).
g. Using torque wrench and screwdriver bit, torque screws (Figure 1, Item 9) to 8 in. lb (0.90 N-m).

15. Lightly lubricate new o-ring (Figure 1, Item 8) with petrolatum and install new o-ring (Figure 1, Item 8) in outer groove of inlet adapter (Figure 1, Item 5).

N

When installing inlet adapter (Figure 1, Item 5), ensure ball bearing (Figure 1, Item 6) and spring (Figure 1, Item 7) are in place.

16. Install inlet adapter (Figure 1, Item 5) into coupling (Figure 1, Item 2).

N

Ensure all 41 ball bearings (Figure 1, Item 3) are accounted for before assembly.

17. Hold coupling (Figure 1, Item 2) over cleaning cloth with screw hole up, insert ball bearings (Figure 1, Item 3) into hole.
18. Lightly lubricate new o-ring (Figure 1, Item 4) with petrolatum and install new o-ring (Figure 1, Item 4) on screw (Figure 1, Item 1).

ASSEMBLE 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER ASSEMBLY - CONTINUED

19. Install screw (Figure 1, Item 1) into coupling (Figure 1, Item 2).
20. Using torque wrench and screwdriver bit, torque screw (Figure 1, Item 1) to 72–80 in. lb (8.13–9.04 N-m).

END OF TASK

TEST REPAIRED 4 IN. MALE X 3 IN. UNISEX DRY-BREAK ADAPTER

1. Using the repaired (dry-break valve) coupling assembly and a similar (dry-break valve) coupling assembly, make a connection with the two (dry-break valve) coupling assemblies to ensure that the couplings will connect properly while in the closed position. If couplings will not connect properly, repair (dry-break valve) coupling assembly.
2. While the couplings are connected, rotate control arm (Figure 1, Item 10) to the open position and try to disconnect the couplings by rotating in a counterclockwise direction. If the couplings disconnect, then repair of the (dry-break valve) coupling assembly is required.
3. Close the control arm (Figure 1, Item 10) and disconnect the (dry-break valve) coupling assemblies by rotating the couplings in a counterclockwise direction.
4. Connect the repaired (dry-break valve) coupling assembly to a similar (dry-break valve) coupling assembly with the inlet capped.
5. Connect a fluid pressure source capable of 100 PSI (689.5 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
6. With the control arm (Figure 1, Item 10) in the open position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
7. Increase pressure to 100 PSI (689.5 kPa) to the repaired (dry-break valve) coupling assembly.
8. Reduce pressure from the test system.
9. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
10. Close the control arm (Figure 1, Item 10) and disconnect the repaired (dry-break valve) coupling assembly from the similar (dry-break valve) coupling assembly by rotating the couplings in a counterclockwise direction.
11. Connect a fluid pressure source capable of 100 PSI (689.5 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
12. With the control arm (Figure 1, Item 10) in the closed position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
13. Increase pressure to 100 PSI (689.5 kPa) to the repaired (dry-break valve) coupling assembly.
14. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
15. Reduce pressure from the test system, remove repaired (dry-break valve) coupling assembly from the test system and install dust cap (Figure 1, Item 29).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, (DRY-BREAK VALVE) 2 IN.
PART NUMBER 64022D
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0–30 in. lb (WP 0162, Item 3)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Sealing compound (WP 0165, Item 11)
Gasket (2) (WP 0166, Item 36)
Petrolatum technical (WP 0165, Item 9)
O-ring (WP 0166, Item 50)
Seal, plain (2) (WP 0166, Item 23,)
Seal, plain (WP 0166, Item 24)
O-ring (WP 0166, Item 54)
O-ring (WP 0166, Item 58)
O-ring (2) (WP 0166, Item 51)
O-ring (WP 0166, Item 55)
Seal, downstream (WP 0166, Item 27)

Equipment Condition

Adapter assembly removed from FSSP (WP 0109).

DISASSEMBLE 2 IN. TEE ASSEMBLY

N

- Repair is limited to replacement of parts found defective during inspection.
- Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), then screw (Figure 1, Item 1) should be replaced.

DISASSEMBLE 2 IN. TEE ASSEMBLY – CONTINUED

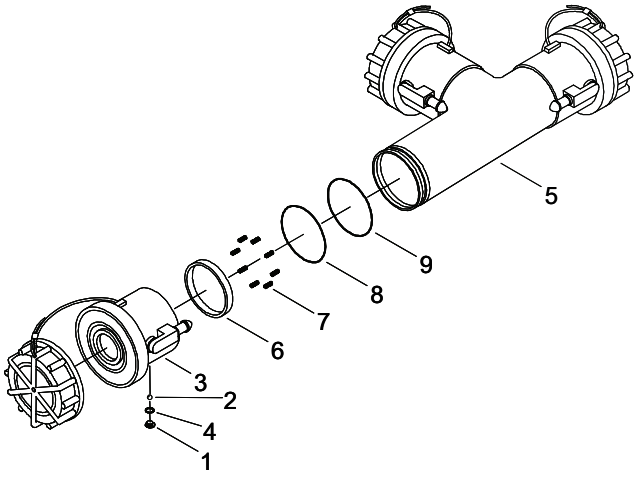


Figure 1. 2 In. Tee Assembly.

1. Using a torque wrench and screwdriver bit, check running torque on screw (Figure 1, Item 1). If running torque is less than 3.5 in. lb (0.45 N-m), discard screw (Figure 1, Item 1).

N

Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 2).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 3).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for during disassembly.

5. Hold coupling (Figure 1, Item 3) with screw hole toward cleaning cloth and rotate coupling (Figure 1, Item 3) to allow ball bearings (Figure 1, Item 2) to fall onto the cleaning cloth.
6. Remove coupling (Figure 1, Item 3) from tee assembly (Figure 1, Item 5) by rotating and pulling each away from the other.
7. Remove seal (Figure 1, Item 6) from tee assembly (Figure 1, Item 5). Discard seal (Figure 1, Item 6).
8. Remove eight springs (Figure 1, Item 7) from tee assembly (Figure 1, Item 5).
9. Remove o-ring (Figure 1, Item 8) from inside groove of tee assembly (Figure 1, Item 5).
10. Discard o-ring (Figure 1, Item 8).
11. Remove o-ring (Figure 1, Item 9) from outer groove of tee assembly (Figure 1, Item 5).
12. Discard o-ring (Figure 1, Item 9).
13. Repeat steps 1-12 for the next two (dry-break valve) coupling assembly removal and disassembly.

END OF TASK

DISASSEMBLE (DRY-BREAK VALVE) COUPLING ASSEMBLY

N

Repair is limited to replacement of parts found defective during inspection.

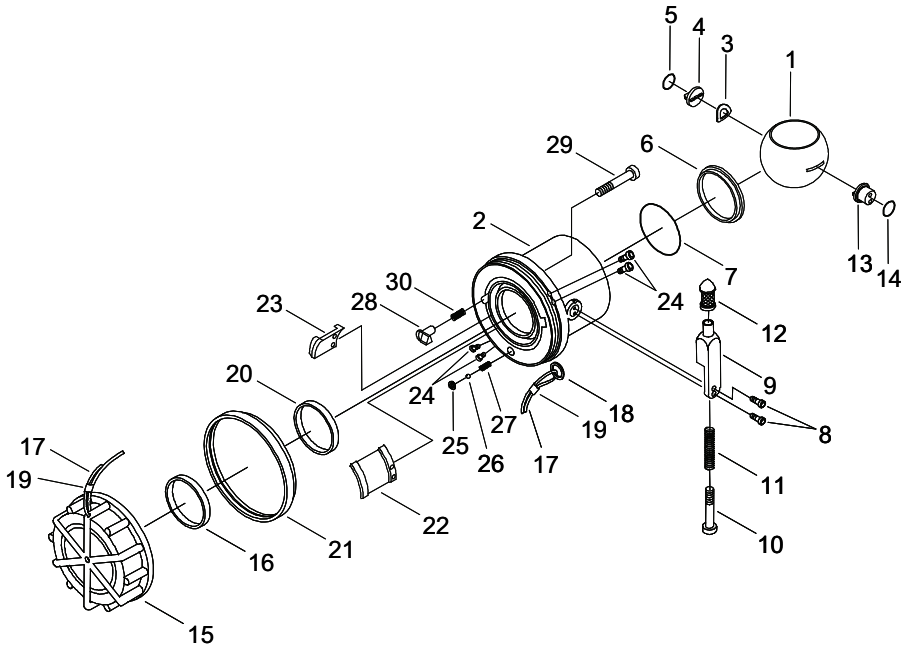


Figure 2. (Dry-Break Valve) Coupling Assembly.

1. Rotate ball valve (Figure 2, Item 1) to the closed position and remove from inside coupling (Figure 2, Item 2).

2 Remove spring washer (Figure 2, Item 3), stop pin (Figure 2, Item 4) and o-ring (Figure 2, Item 5) from inside coupling (Figure 2, Item 2).

3. Discard o-ring (Figure 2, Item 5).
4. Remove seal (Figure 2, Item 6) from coupling (Figure 2, Item 2).
5. Discard seal (Figure 2, Item 6).
6. Remove o-ring (Figure 2, Item 7) from coupling (Figure 2, Item 2).
7. Discard o-ring (Figure 2, Item 7).
8. Remove screws (Figure 2, Item 8) from control arm (Figure 2, Item 9).
9. Remove control arm (Figure 2, Item 9) from coupling (Figure 2, Item 2).

N

If it is necessary to disassemble control arm (Figure 2, Item 9), perform the following steps:

a. Remove screw (Figure 2, Item 10) from control arm (Figure 2, Item 9).

b. Remove spring (Figure 2, Item 11) from control arm (Figure 2, Item 9).

c. Remove knob (Figure 2, Item 12) from control arm (Figure 2, Item 9).

DISASSEMBLE (DRY-BREAK VALVE) COUPLING ASSEMBLY-CONTINUED

10. Remove control arm shaft (Figure 2, Item 13) and o-ring (Figure 2, Item 14) from inside coupling (Figure 2, Item 2).
11. Discard o-ring (Figure 2, Item 14).
12. Remove dust cap (Figure 2, Item 15) from coupling (Figure 2, Item 2).
13. Remove seal (Figure 2, Item 16) from dust cap (Figure 2, Item 15).
14. Discard seal (Figure 2, Item 16).

N

If it is necessary to replace dust cap (Figure 2, Item 16), perform the following removal steps:

a. Cut cable (Figure 2, Item 17) or remove split ring (Figure 2, Item 18) from coupling (Figure 2, Item 2) and cable (Figure 2, Item 17).
b. Cut cable (Figure 2, Item 17) from dust cap (Figure 2, Item 15).
c. Remove cable (Figure 2, Item 17) and sleeve (Figure 2, Item 19).

15. Remove seal (Figure 2, Item 20) from coupling (Figure 2, Item 2) interface.
16. Discard seal (Figure 2, Item 20).

N

If it is necessary to replace bumper (Figure 2, Item 21) or lugs (Figure 2, Item 22, 23), perform the following steps:

a. Remove bumper (Figure 2, Item 21) from coupling (Figure 2, Item 2).
b. Remove screws (Figure 2, Item 24) from coupling (Figure 2, Item 2).
c. Remove lug (Figure 2, Item 22) or lug (Figure 2, Item 23) from coupling (Figure 2, Item 2).

N

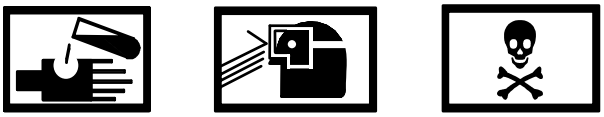
- Do not remove spring washer (Figure 2, Item 25), ball bearing (Figure 2, Item 26) or spring (Figure 2, Item 27). If replacement of ball bearing (Figure 2, Item 26) is required, then coupling (Figure 2, Item 2) must be replaced.
- If it is necessary to replace lockout pin (Figure 2, Item 28), perform the following removal steps:

  a. Remove screw (Figure 2, Item 29) from coupling (Figure 2, Item 2).
  b. Remove lockout pin (Figure 2, Item 28) from coupling (Figure 2, Item 2).
  c. Remove spring (Figure 2, Item 30) from coupling (Figure 2, Item 2).

END OF TASK

CLEAN 2 IN. TEE ASSEMBLY AND (DRY-BREAK VALVE) COUPLING ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. TEE ASSEMBLY AND (DRY-BREAK VALVE) COUPLING ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Inspect dry-break valved coupling assemblies for signs of leakage or damage. If signs of leakage or damage exists, repair dry-break valved coupling assemblies.
3. Inspect bumper (Figure 2, Item 21) for cracks, tears or cuts. If cracks, tears or cuts are found, replace with a serviceable like item.
4. Inspect dust cap (Figure 2, Item 15) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

N

The purpose of ball bearing (Figure 2, Item 26) is to provide electrical continuity between mating surfaces.

5. Inspect ball bearing (Figure 2, Item 26) for damage. If damage is found replace with serviceable like item.
6. Inspect control arm (Figure 2, Item 9) for cracks or damage. If cracks or damage is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE (DRY-BREAK VALVE) COUPLING ASSEMBLY

N

If it was necessary to replace lockout pin (Figure 2, Item 28), perform the following installation steps:

a. Install screw (Figure 2, Item 29) into coupling (Figure 2, Item 2).

b. Install spring (Figure 2, Item 30) into coupling (Figure 2, Item 2) and over screw (Figure 2, Item 29).

c. Install lockout pin (Figure 2, Item 28) into coupling (Figure 2, Item 2).

d. Tighten screw (Figure 2, Item 29) until ramp edge of lockout pin (Figure 2, Item 28) is even with or slightly below the adjacent ledge of coupling (Figure 2, Item 2).

N

If it was necessary to replace bumper (Figure 2, Item 21) or lugs (Figure 2, Item 22, 23), perform the following installation steps:

a. Position lug (Figure 2, Item 22) or lug (Figure 2, Item 23) in coupling (Figure 2, Item 2).

b. Install screws (Figure 2, Item 24) into coupling (Figure 2, Item 2).

c. Using torque wrench and screwdriver bit, torque screws (Figure 2, Item 24) to 6 in. lb (0.70 N-m).

d. Position bumper (Figure 2, Item 21) with thin lip seal end facing away from coupling (Figure 2, Item 2).

e. Install bumper (Figure 2, Item 21) on coupling (Figure 2, Item 2).

f. Lightly lubricate new seal (Figure 2, Item 20) with petrolatum and install new seal (Figure 2, Item 20) into coupling (Figure 2, Item 2).

N

If it was necessary to replace dust cap (Figure 2, Item 15), perform the following installation steps:

a. Loop one end of 18 in. cable (Figure 2, Item 17) through sleeve (Figure 2, Item 19), dust cap (Figure 2, Item 15) and back through sleeve (Figure 2, Item 19).

b. Using pliers, crimp sleeve (Figure 2, Item 19).

c. Loop other end of 18 in. cable (Figure 2, Item 17) through sleeve (Figure 2, Item 19), split ring (Figure 2, Item 18) and back through sleeve (Figure 2, Item 19).

d. Using pliers, crimp sleeve (Figure 2, Item 19).

e. Lightly lubricate new seal (Figure 2, Item 16) and install new seal (Figure 2, Item 16) into dust cap (Figure 2, Item 15).

f. Install dust cap (Figure 2, Item 15) on coupling (Figure 2, Item 2).

1. Lightly lubricate new o-ring (Figure 2, Item 14) with petrolatum and install new o-ring (Figure 2, Item 14) on control arm shaft (Figure 1, Item 13).

ASSEMBLE (DRY-BREAK VALVE) COUPLING ASSEMBLY - CONTINUED

N

If it was necessary to disassemble control arm (Figure 2, Item 9), perform the following assembly steps:

a Place spring (Figure 2, Item 11) on screw (Figure 2, Item 10).

b Install screw (Figure 2, Item 10) into control arm (Figure 2, Item 9).

c Install knob (Figure 2, Item 12) on control arm (Figure 2, Item 9).

d Tighten screw (Figure 2, Item 10) hand tight.

2. Install control arm shaft (Figure 2, Item 13) inside coupling (Figure 2, Item 2).
3. Position control arm (Figure 2, Item 9) with holes on control arm shaft (Figure 2, Item 13).
4. Install screws (Figure 2, Item 8) through control arm (Figure 2, Item 9) and into control arm shaft (Figure 2, Item 13).
5. Using torque wrench and screwdriver bit, torque screws (Figure 2, Item 8) to 8 in. lb (0.90 N-m).
6. Lightly lubricate new o-ring (Figure 2, Item 7) with petrolatum and install new o-ring (Figure 2, Item 7) in coupling (Figure 2, Item 2).
7. Install new seal (Figure 2, Item 6) into coupling (Figure 2, Item 2).
8. Lightly lubricate new o-ring (Figure 2, Item 5) with petrolatum and install new o-ring (Figure 2, Item 5) in groove of stop pin (Figure 2, Item 4).
9. Install spring washer (Figure 2, Item 3) in groove of stop pin (Figure 2, Item 4).
10. Install stop pin (Figure 2, Item 4) inside coupling (Figure 2, Item 2).
11. Align slots in ball valve (Figure 2, Item 1) with tangs on control arm shaft (Figure 2, Item 13) and stop pin (Figure 2, Item 4).
12. Install ball valve (Figure 2, Item 1) in coupling (Figure 2, Item 2).
13. Rotate control arm (Figure 2, Item 9) to the open position to retain ball valve (Figure 2, Item 1) in place.

N

To test function of lockout pin (Figure 2, Item 28), if not removed from coupling (Figure 2, Item 2), perform the following steps:

a. With ball valve (Figure 2, Item 1) in the open position, depress lockout pin (Figure 2, Item 28). If lockout pin (Figure 2, Item 28) cannot be depressed, then stop pin (Figure 2, Item 4) has been installed correctly.

b. With ball valve (Figure 2, Item 1) in the open position, depress lockout pin (Figure 2, Item 28). If lockout pin (Figure 2, Item 28) can be depressed, then stop pin (Figure 2, Item 4) has been installed incorrectly.

c. If stop pin (Figure 2, Item 4) was installed incorrectly, remove ball valve (Figure 2, Item 1) and reposition stop pin (Figure 2, Item 4).

ASSEMBLE (DRY-BREAK VALVE) COUPLING ASSEMBLY - CONTINUED

N

During adjustment of lockout pin (Figure 2, Item 28), ensure that ball valve (Figure 2, Item 1) is securely seated at all times. Perform the following steps

a. Pull knob (Figure 2, Item 12) on control arm (Figure 2, Item 9) back and slowly rotate towards the closed position. If control arm (Figure 2, Item 9) cannot be rotated or is too tight, then lockout pin (Figure 2, Item 28) requires adjustment.

b. Adjust lockout pin (Figure 2, Item 28) by loosening screw (Figure 2, Item 29) 1/4 turn at a time until control arm (Figure 2, Item 9) can be rotated freely.

END OF TASK

ASSEMBLE 2 IN. TEE ASSEMBLY

1. Lightly lubricate new o-ring (Figure 3, Item 1) with petrolatum and install new o-ring (Figure 3, Item 1) in second groove on outside of tee assembly (Figure 3, Item 2).

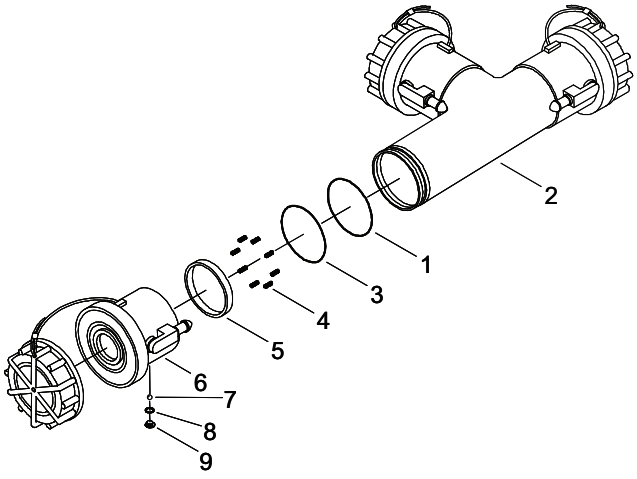


Figure 3. 2 In. Tee Assembly.

2. Lightly lubricate new o-ring (Figure 3, Item 3) with petrolatum and install new o-ring (Figure 3, Item 3) in inside groove of tee assembly (Figure 3, Item 2).
3. Position eight springs (Figure 3, Item 4) in the eight holes on the inside of the tee assembly (Figure 3, Item 2).
4. Install new seal (Figure 3, Item 5) in inside groove of tee assembly (Figure 3, Item 2).
5. Position coupling (Figure 3, Item 6) into tee assembly (Figure 3, Item 2) and press in to line up groove of tee assembly (Figure 3, Item 2) with groove of coupling (Figure 3, Item 6).

ASSEMBLE 2 IN. TEE ASSEMBLY-CONTINUED

N

Ensure all 41 ball bearings (Figure 3, Item 7) are accounted for before assembly.

6. Hold coupling (Figure 3, Item 6) over cleaning cloth with screw hole up and insert ball bearings (Figure 3, Item 7) into hole.
7. Lightly lubricate new o-ring (Figure 3, Item 8) with petrolatum and install new o-ring (Figure 3, Item 8) on screw (Figure 3, Item 9).
8. Install screw (Figure 3, Item 9) into coupling (Figure 3, Item 6).
9. Using torque wrench and screwdriver bit, torque screw (Figure 3, Item 9) to 25 in. lb (2.8 N-m).

END OF TASK

TEST REPAIRED (DRY-BREAK VALVE) COUPLING ASSEMBLY

1. Using the repaired (dry-break valve) coupling assembly and a similar (dry-break valve) coupling assembly, make a connection with the two (dry-break valve) coupling assemblies to ensure that the couplings will connect properly while in the closed position. If couplings will not connect properly, repair (dry-break valve) coupling assembly.
2. While the couplings are connected, rotate control arm (Figure 2, Item 9) to the open position and try to disconnect the couplings by rotating in a counterclockwise direction. If the couplings disconnect, repair of the dry-break valved coupling assembly is required.
3. Close the control arm (Figure 2, Item 9) and disconnect the (dry-break valve) coupling assemblies by rotating the couplings in a counterclockwise direction.
4. Connect the repaired (dry-break valve) coupling assembly to a similar (dry-break valve) coupling assembly with the inlet capped.
5. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
6. With the control arm (Figure 2, Item 9) in the open position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
7. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
8. Reduce pressure from the test system.
9. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.
10. Close the control arm (Figure 2, Item 9) and disconnect the repaired (dry-break valve) coupling assembly from the similar (dry-break valve) coupling assembly by rotating the couplings in a counterclockwise direction.
11. Connect a fluid pressure source capable of 100 PSI (689.47 kPa) to the inlet of the repaired (dry-break valve) coupling assembly.
12. With the control arm (Figure 2, Item 9) in the closed position, apply pressure of 5 PSI (34.47 kPa) to the repaired (dry-break valve) coupling assembly.
13. Increase pressure to 100 PSI (689.47 kPa) to the repaired (dry-break valve) coupling assembly.
14. Inspect repaired (dry-break valve) coupling assembly for leakage over a period of at least 1 minute. If (dry-break valve) coupling assembly leaks, repair (dry-break valve) coupling assembly.

TEST REPAIRED (DRY-BREAK VALVE) COUPLING ASSEMBLY - CONTINUED

15. Reduce pressure from the test system, remove repaired (dry-break valve) coupling assembly from the test system and install dust cap (Figure 2, Item 16).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 4 IN. X MALE 4 IN. X FEMALE 4 IN.
PART NUMBER 78021-100
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR – CONTINUED

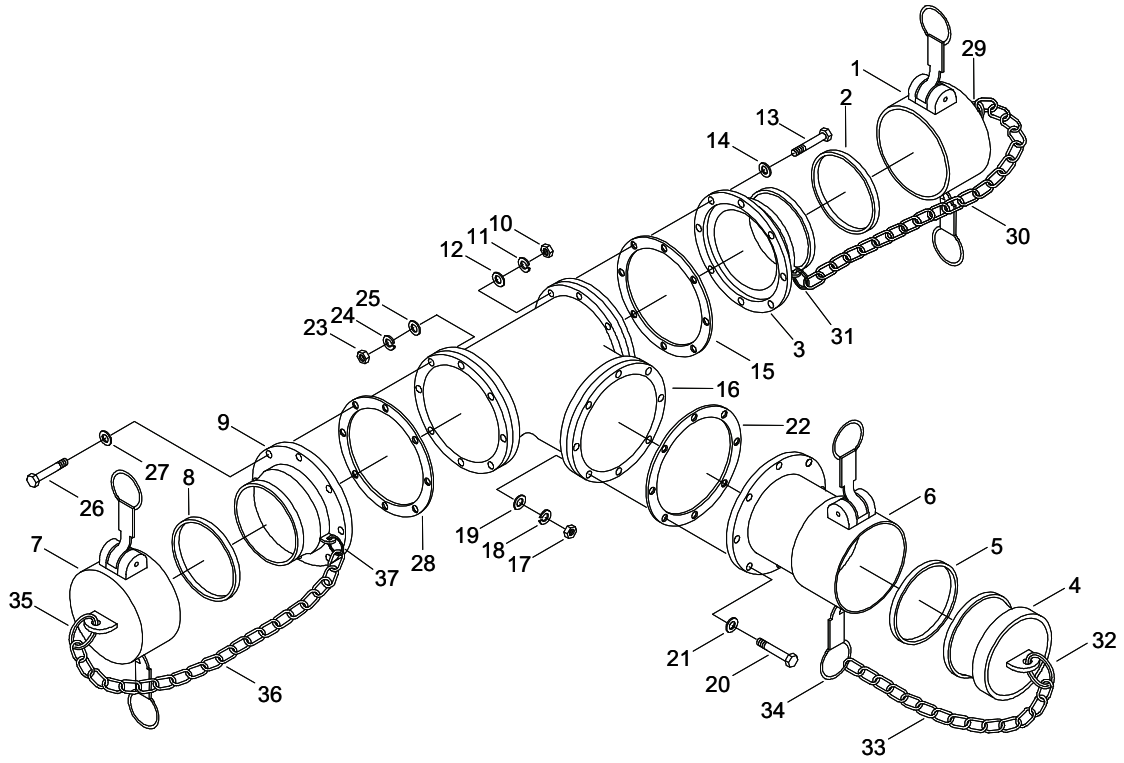


Figure 1. 4 In. Female X 4 In. Male X 4 In. Female Tee Assembly.

1. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
2. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
3. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).
4. Discard gaskets (Figure 1, Item 2, 5, 8).
5. Remove eight nuts (Figure 1, Item 10), eight lock washers (Figure 1, Item 11), eight flat washers (Figure 1, Item 12), eight bolts (Figure 1, Item 13), eight flat washers (Figure 1, Item 14), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
6. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
7. Remove eight nuts (Figure 1, Item 17), eight lock washers (Figure 1, Item 18), eight flat washers (Figure 1, Item 19), eight bolts (Figure 1, Item 20), eight flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
8. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
9. Remove eight nuts (Figure 1, Item 23), eight lock washers (Figure 1, Item 24), eight flat washers (Figure 1, Item 25), eight bolts (Figure 1, Item 26), eight flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).
10. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

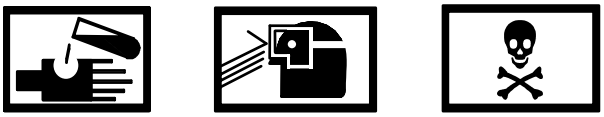
DISASSEMBLE 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR – CONTINUED

11. Remove split ring (Figure 1, Item 29) from quick disconnect dust cap (Figure 1, Item 1).
12. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
13. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
14. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
15. Remove split ring (Figure 1, Item 32) from quick disconnect dust plug (Figure 1, Item 4).
16. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
17. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
18. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
19. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
20. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
21. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
22. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).

END OF TASK

CLEAN 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY COMPONENTS

1. Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like item.
3. Inspect quick disconnect dust caps and plugs for cracks or corrosion or stripped threads. If cracks or corrosion or stripped threads are found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY

1. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
2. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
3. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
4. Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).
5. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
6. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
7. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
8. Install split ring (Figure 1, Item 32) on quick disconnect dust plug (Figure 1, Item 4).
9. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).
10. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
11. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
12. Install split ring (Figure 1, Item 29) on quick disconnect dust cap (Figure 1, Item 1).
13. Install eight bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
14. Install eight flat washers (Figure 1, Item 25), eight new lock washers (Figure 1, Item 24) and eight nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten eight nuts (Figure 1, Item 23).
15. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).
16. Install eight bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
17. Install eight flat washers (Figure 1, Item 19), eight new lock washers (Figure 1, Item 18) and eight nuts (Figure 1, Item 17) on screws (Figure 1, Item 20). Hand tighten eight nuts (Figure 1, Item 17).
18. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).
19. Install eight bolts (Figure 1, Item 13) and flat washers (Figure 1, Item 14) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
20. Install eight flat washers (Figure 1, Item 12), eight new lock washers (Figure 1, Item 11) and eight nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten eight nuts (Figure 1, Item 10).
21. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).
22. Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).

ASSEMBLE 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE TEE ASSEMBLY - CONTINUED

23. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) into coupling (Figure 1, Item 6).
24. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto coupling (Figure 1, Item 3).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 4 IN.
PART NUMBER 300.2434
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket, (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee valve assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY-CONTINUED

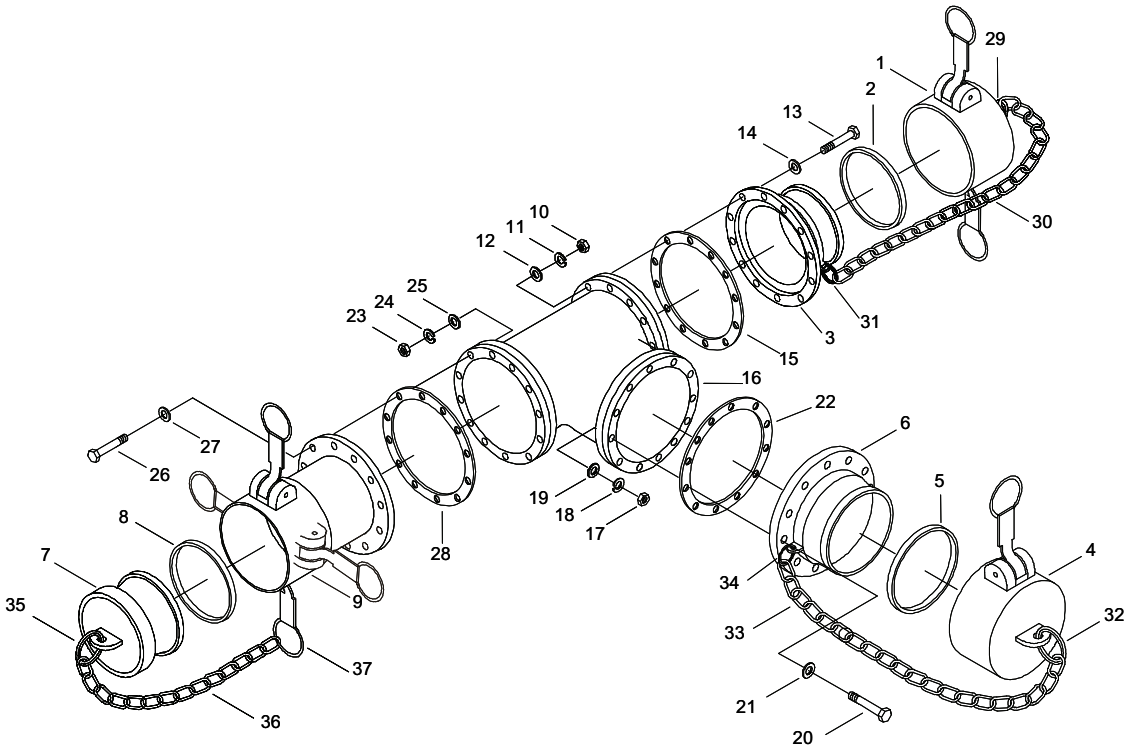


Figure 1. 6 In. Female X 6 In. Male X 4 In. Male Tee Assembly.

1. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
2. Remove quick disconnect dust cap (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
3. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).
4. Discard gaskets (Figure 1, Item 2, 5, 8).
5. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve bolts (Figure 1, Item 13), twelve flat washers (Figure 1, Item 14), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
6. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
7. Remove eight nuts (Figure 1, Item 17), eight lock washers (Figure 1, Item 18), eight flat washers (Figure 1, Item 19), eight bolts (Figure 1, Item 20), eight flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
8. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
9. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve bolts (Figure 1, Item 26), twelve flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).

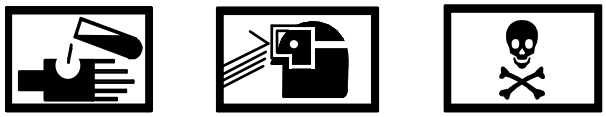
DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY-CONTINUED

10. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).
11. Remove split ring (Figure 1, Item 29) from quick disconnect dust cap (Figure 1, Item 1).
12. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
13. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
14. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
15. Remove split ring (Figure 1, Item 32) from quick disconnect dust cap (Figure 1, Item 4).
16. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
17. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
18. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
19. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
20. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
21. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
22. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).

END OF TASK

CLEAN 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping Items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY COMPONENTS

1. Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
3. Inspect quick disconnect dust caps for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY

1. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
2. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
3. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
4. Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).
5. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
6. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
7. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
8. Install split ring (Figure 1, Item 32) on quick disconnect dust cap (Figure 1, Item 4).
9. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).
10. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
11. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
12. Install split ring (Figure 1, Item 29) on quick disconnect dust cap (Figure 1, Item 1).
13. Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
14. Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts (Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).
15. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 23) to 27–33 ft lb (37–45 N-m).
16. Install eight bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
17. Install eight flat washers (Figure 1, Item 19), eight new lock washers (Figure 1, Item 18) and eight nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten eight nuts (Figure 1, Item 17).
18. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 23) to 27–33 ft lb (37–45 N-m).
19. Install twelve bolts (Figure 1, Item 13) and flat washers (Figure 1, Item 14) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
20. Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten eight nuts (Figure 1, Item 10).
21. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 27–33 ft lb (37–45 N-m).

ASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE TEE ASSEMBLY - CONTINUED

22. Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).
23. Install new gasket (Figure 1, Item 5) and quick disconnect dust cap (Figure 1, Item 4) into coupling (Figure 1, Item 6).
24. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto coupling (Figure 1, Item 3).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X MALE 4IN.
PART NUMBER 78026-100
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE IN TEE ASSEMBLY (CAM-LOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE IN TEE ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

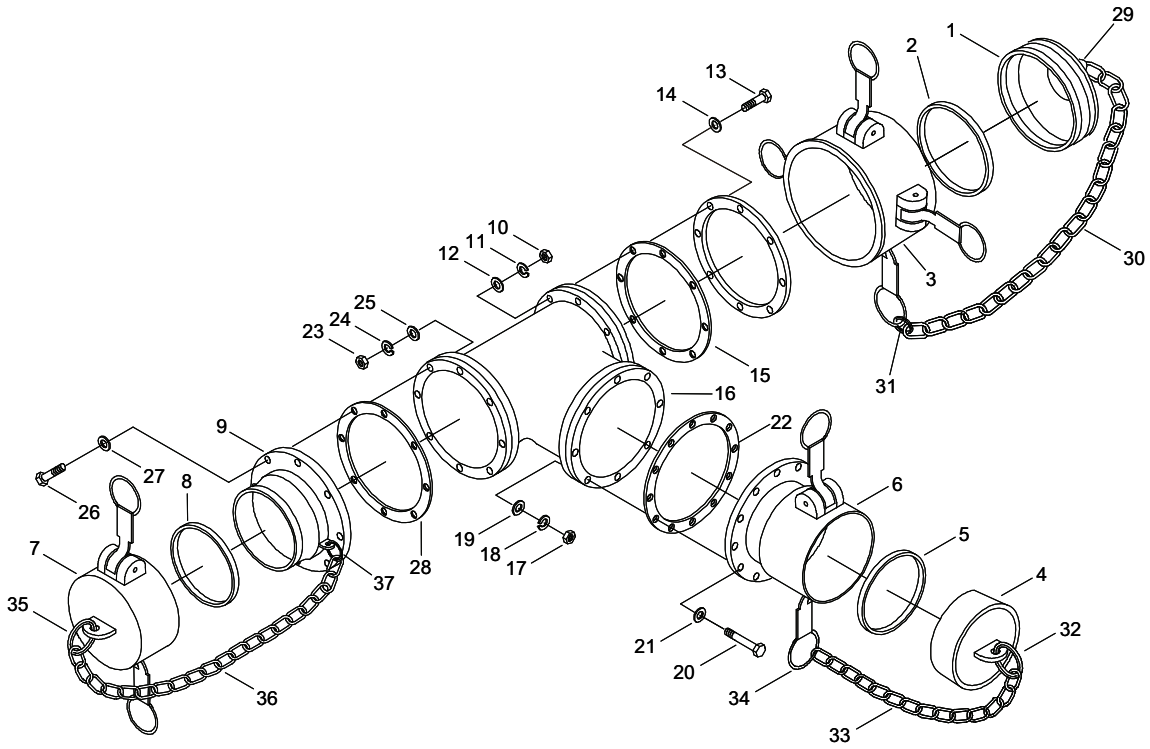


Figure 1. 6 In. Male X 6 In. Female X 4 In. Male Tee Assembly.

1. Remove split ring (Figure 1, Item 29) from quick disconnect dust cap (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
3. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
4. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
5. Remove split ring (Figure 1, Item 32) from quick disconnect dust plug (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
7. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
9. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
10. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
11. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
12. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).
13. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
14. Remove quick disconnect dust cap (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).

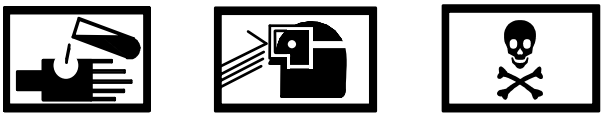
DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE IN TEE ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

15. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).
16. Discard gaskets (Figure 1, Items 2, 5 and 8).
17. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve bolts (Figure 1, Item 13), twelve flat washers (Figure 1, Item 14), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
18. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
19. Remove eight nuts (Figure 1, Item 17), eight lock washers (Figure 1, Item 18), eight flat washers (Figure 1, Item 19), eight bolts (Figure 1, Item 20), eight flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
20. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
21. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve bolts (Figure 1, Item 26), twelve flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).
22. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

END OF TASK

CLEAN 6 IN. MALE X 6 IN. FEMALE X 4 IN MALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE TEE ASSEMBLY COMPONENTS

1. Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
3. Inspect quick disconnect dust caps for cracks, corrosion or stripped threads. If cracks, corrosion or stripped threads are found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE TEE ASSEMBLY

1. Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
2. Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).
3. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).
4. Install twelve bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
5. Install twelve flat washers (Figure 1, Item 19), twelve new lock washers (Figure 1, Item 18) and twelve nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten twelve nuts (Figure 1, Item 17).
6. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).
7. Install twelve bolts (Figure 1, Item 13) and flat washers (Figure 1, Item 14) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
8. Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten twelve nuts (Figure 1, Item 10).
9. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).
10. Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).
11. Install new gasket (Figure 1, Item 5) and quick disconnect dust cap (Figure 1, Item 4) into coupling (Figure 1, Item 6).
12. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto coupling (Figure 1, Item 3).
13. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
14. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
15. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
16. Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).
17. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
18. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
19. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
20. Install split ring (Figure 1, Item 32) on quick disconnect dust cap (Figure 1, Item 4).

ASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. MALE TEE ASSEMBLY - CONTINUED

21. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).
22. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
23. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
24. Install split ring (Figure 1, Item 29) on quick disconnect dust cap (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, MALE 6 IN. X FEMALE 6 IN. X FEMALE 4 IN.
PART NUMBER 300.2432
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR

N

Repair is limited to replacement of parts found defective during inspection

DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR-CONTINUED

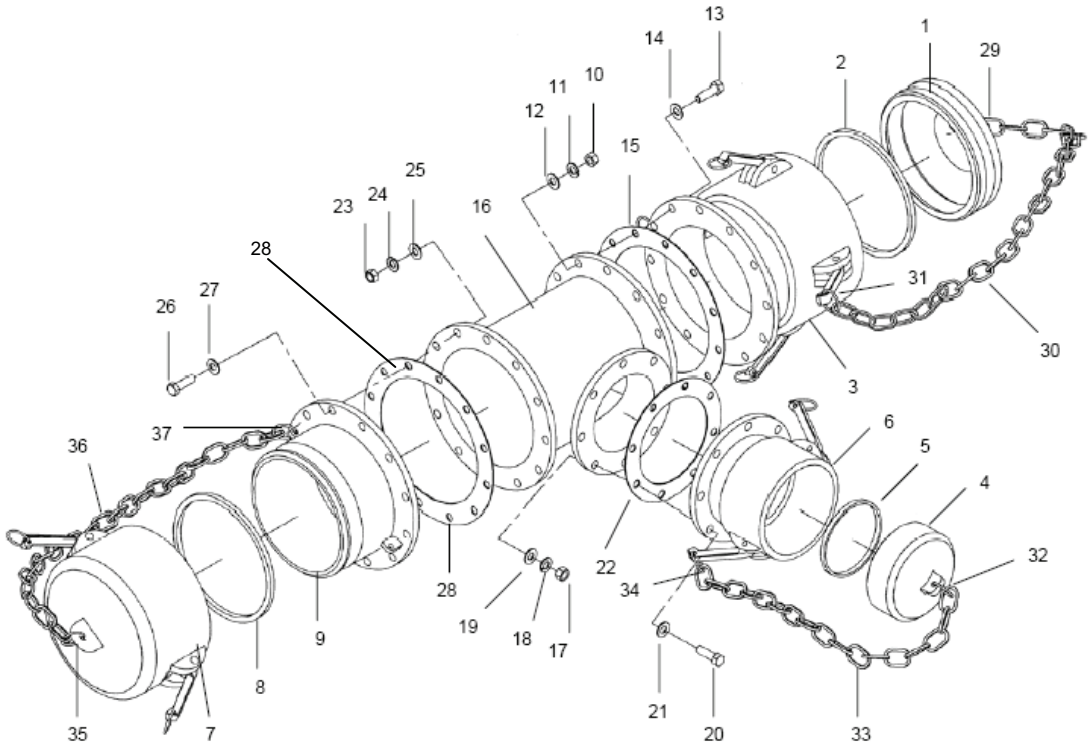


Figure 1. 6 In. Male X 6 In. Female X 4 In. Female Tee Assembly.

1. Remove split ring (Figure 1, Item 29) from quick disconnect dust plug (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
3. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
4. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
5. Remove split ring (Figure 1, Item 32) from quick disconnect dust plug (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
7. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
9. Remove split ring (Figure 1, Item 35) from quick disconnect dust cap (Figure 1, Item 7).
10. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
11. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
12. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).
13. Remove quick disconnect dust plug (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).

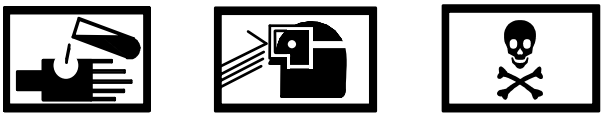
DISASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR-CONTINUED

14. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
15. Remove quick disconnect dust cap (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).
16. Discard gaskets (Figure 1, Item 2, 5, 8).
17. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve bolts (Figure 1, Item 13), twelve flat washers (Figure 1, Item 14), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
18. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
19. Remove eight nuts (Figure 1, Item 17), eight lock washers (Figure 1, Item 18), eight flat washers (Figure 1, Item 19), eight bolts (Figure 1, Item 20), eight flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
20. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
21. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve bolts (Figure 1, Item 26), twelve flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).
22. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

END OF TASK

CLEAN 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY COMPONENTS

1 Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.

2 Inspect quick disconnect dust caps for cracks, corrosion or stripped threads. If cracks, corrosion or stripped threads are found, replace with a serviceable like Item.

3 Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY

1. Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
2. Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).
3. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 27–33 ft lb (37–43 ft) 50-58 N-m).
4. Install eight bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
5. Install eight flat washers (Figure 1, Item 19), eight new lock washers (Figure 1, Item 18) and eight nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten eight nuts (Figure 1, Item 17).
6. Using torque wrench and adapter, torque eight nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).
7. Install twelve bolts (Figure 1, Item 13) and flat washers (Figure 1, Item 14) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
8. Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten twelve nuts (Figure 1, Item 10).
9. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).
10. Install new gasket (Figure 1, Item 8) and quick disconnect dust cap (Figure 1, Item 7) into coupling (Figure 1, Item 9).
11. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) into coupling (Figure 1, Item 6).
12. Install new gasket (Figure 1, Item 2) and quick disconnect dust plug (Figure 1, Item 1) onto coupling (Figure 1, Item 3).
13. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
14. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
15. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
16. Install split ring (Figure 1, Item 35) on quick disconnect dust cap (Figure 1, Item 7).
17. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
18. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
19. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
20. Install split ring (Figure 1, Item 32) on quick disconnect dust plug (Figure 1, Item 4).

ASSEMBLE 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE TEE ASSEMBLY - CONTINUED

21. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30
22. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
23. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
24. Install split ring (Figure 1, Item 29) on quick disconnect dust plug (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X FEMALE 6 IN. X MALE 6 IN.
PART NUMBER 300.2433
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR-CONTINUED

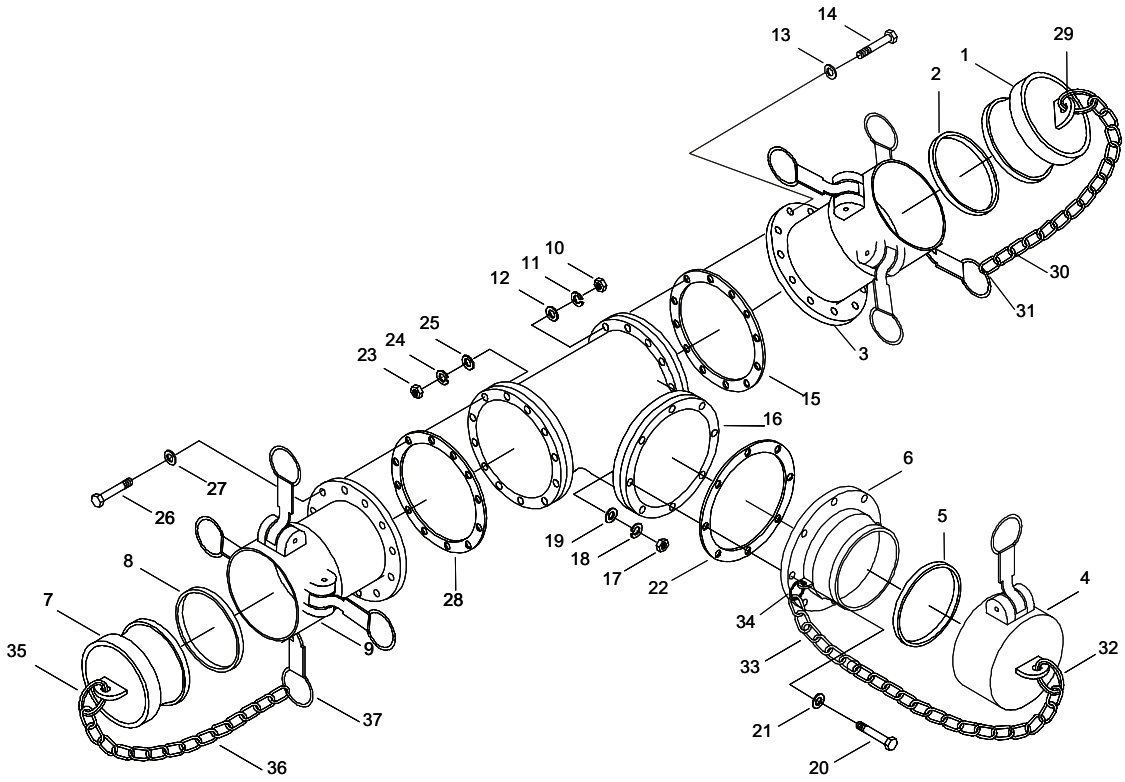


Figure 1. 6 In. Female X 6 In. Female X 6 In. Male Tee Assembly.

1. Remove split ring (Figure 1, Item 29) from quick disconnect dust plug (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
3. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
4. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
5. Remove split ring (Figure 1, Item 32) from quick disconnect dust cap (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
7. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
9. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
10. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
11. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
12. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).

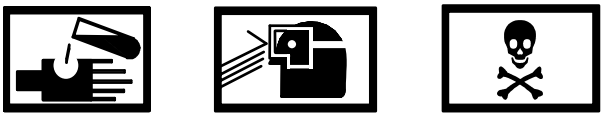
DISASSEMBLE 6 IN. FEMALE X 6 IN.FEMALE X 6 IN. MALE TEE ASSEMBLY – CONTINUED

13. Remove quick disconnect dust plug (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
14. Remove quick disconnect dust cap (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
15. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).
16. Discard gaskets (Figure 1, Item 2, 5, 8).
17. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve bolts (Figure 1, Item 14), twelve flat washers (Figure 1, Item 13), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
18. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
19. Remove twelve nuts (Figure 1, Item 17), twelve lock washers (Figure 1, Item 18), twelve flat washers (Figure 1, Item 19), twelve bolts (Figure 1, Item 20), twelve flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
20. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
21. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve bolts (Figure 1, Item 26), twelve flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).
22. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

END OF TASK

CLEAN 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY COMPONENTS

1. Inspect tee assembly for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect quick disconnect dust caps and split rings for cracks or corrosion. If cracks or corrosion or broken fittings are found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY

1 Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).

2 Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).

3 Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).

4 Install twelve bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).

5 Install twelve flat washers (Figure 1, Item 19), twelve new lock washers (Figure 1, Item 18) and twelve nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten twelve nuts (Figure 1, Item 17).

6 Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).

7 Install twelve bolts (Figure 1, Item 14) and flat washers (Figure 1, Item 13) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).

8 Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 14). Hand tighten twelve nuts (Figure 1, Item 10).

9 Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).

10 Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).

11 Install new gasket (Figure 1, Item 5) and quick disconnect dust cap (Figure 1, Item 4) into coupling (Figure 1, Item 6).

12 Install new gasket (Figure 1, Item 2) and quick disconnect dust plug (Figure 1, Item 1) onto coupling (Figure 1, Item 3).

13 Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).

14 Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).

15 Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).

16 Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).

17 Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).

18 Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).

19 Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).

20 Install split ring (Figure 1, Item 32) on quick disconnect dust cap (Figure 1, Item 4).

21 Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).

ASSEMBLE 6 IN. FEMALE X 6 IN. FEMALE X 6 IN. MALE TEE ASSEMBLY-CONTINUED

22. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
23. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
24. Install split ring (Figure 1, Item 29) on quick disconnect dust plug (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X FEMALE 6 IN.
PART NUMBER 300.2431
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

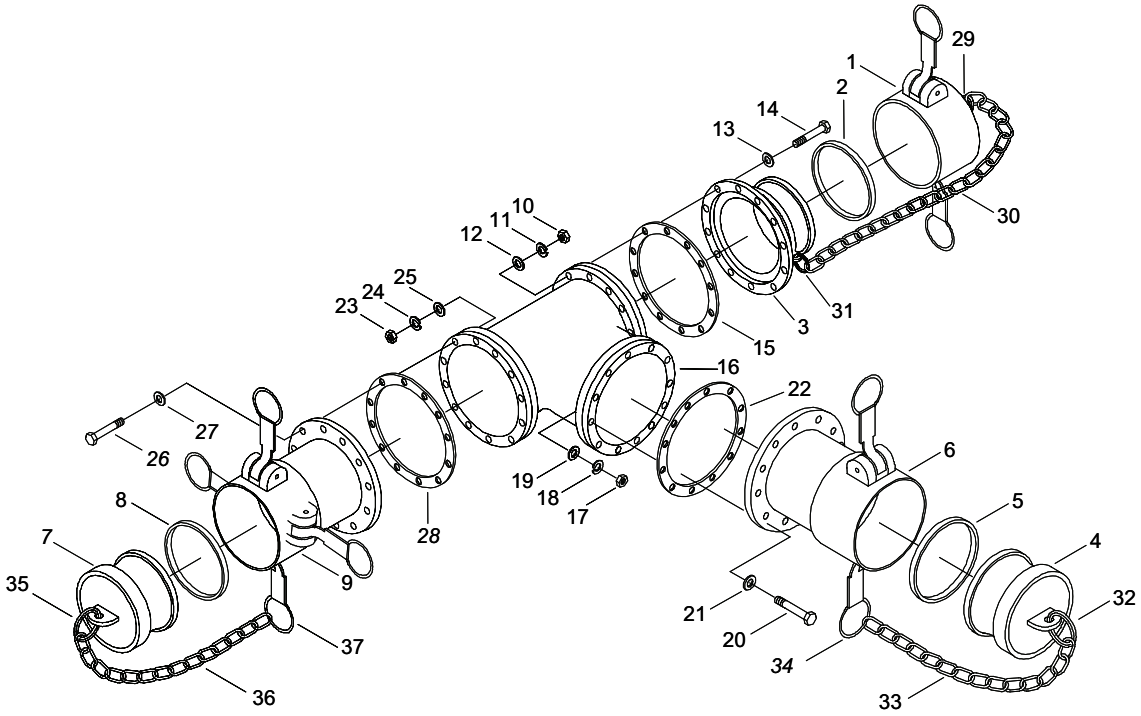


Figure 1. 6 In. Female X 6 In. Male X 6 In. Female Tee Assembly.

1. Remove split ring (Figure 1, Item 29) from quick disconnect dust cap (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
3. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
4. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
5. Remove split ring (Figure 1, Item 32) from quick disconnect dust plug (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
7. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
9. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
10. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
11. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
12. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).
13. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
14. Remove quick disconnect dust plug (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
15. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY (CAM-LOCK CONNECTOR-CONTINUED

16. Discard gaskets (Figure 1, Items 2, 5 and 8).
17. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve flat washers (Figure 1, Item 13), and twelve bolts (Figure 1, Item 14) from tee (Figure 1, Item 16).
18. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
19. Remove twelve nuts (Figure 1, Item 17), twelve lock washers (Figure 1, Item 18), twelve flat washers (Figure 1, Item 19), twelve bolts (Figure 1, Item 20), twelve flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
20. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
21. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve flat washers (Figure 1, Item 27), and twelve bolts (Figure 1, Item 26) from tee (Figure 1, Item 16).
22. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

END OF TASK

CLEAN 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY COMPONENTS

1. Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like item.
3. Inspect quick disconnect dust caps for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like item.

END OF TASK

ASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY

1. Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
2. Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).
3. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).
4. Install twelve bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
5. Install twelve flat washers (Figure 1, Item 19), twelve new lock washers (Figure 1, Item 18) and twelve nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten twelve nuts (Figure 1, Item 17).
6. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).
7. Install twelve bolts (Figure 1, Item 13) and flat washers (Figure 1, Item 14) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
8. Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten twelve nuts (Figure 1, Item 10).
9. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).
10. Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).
11. Install new gasket (Figure 1, Item 5) and quick disconnect dust plug (Figure 1, Item 4) into coupling (Figure 1, Item 6).
12. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto coupling (Figure 1, Item 3).
13. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
14. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
15. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
16. Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).
17. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
18. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
19. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
20. Install split ring (Figure 1, Item 32) on quick disconnect dust plug (Figure 1, Item 4).
21. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).

ASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE TEE ASSEMBLY-CONTINUED

22. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
23. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
24. Install split ring (Figure 1, Item 29) on quick disconnect dust cap (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TEE ASSEMBLY, FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN.
PART NUMBER 78027-100
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 3/8 sqdr 5–75 ft lb (WP 0162, Item 10)
Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end (WP 0162, Item 11)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Gasket (3) (WP 0166, Item 34)
Gasket (3) (WP 0166, Item 38)
Washer, lock (24) (WP 0166, Item 16)

Equipment Condition

Tee assembly removed from FSSP (WP 0109).

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

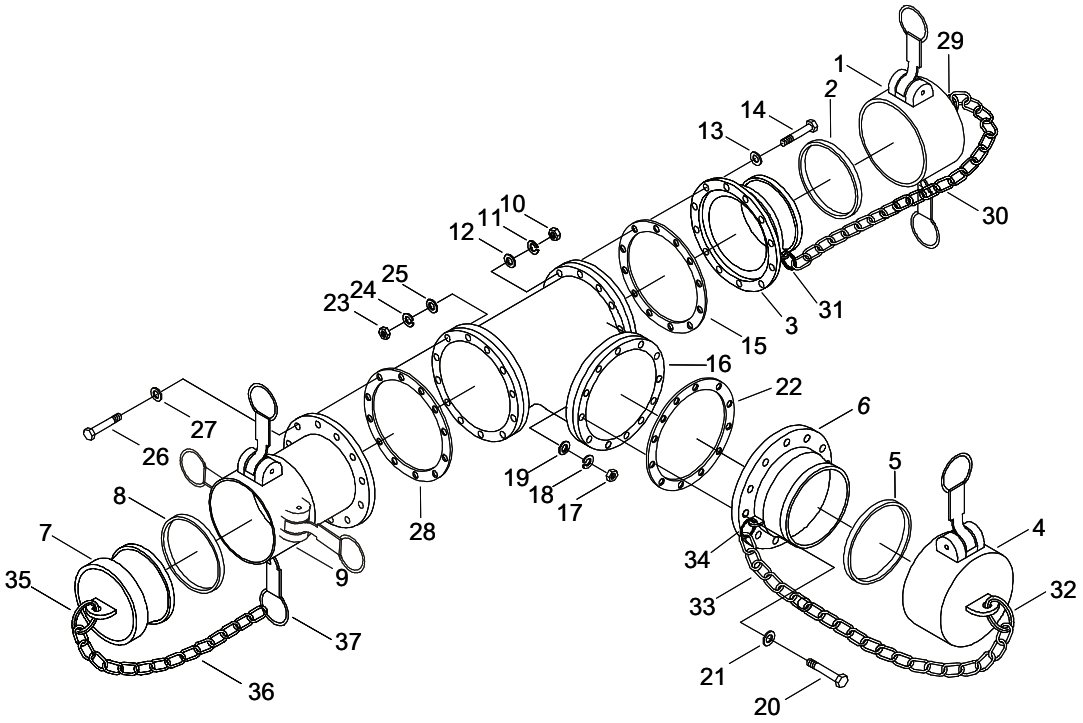


Figure 1. 6 In. Female X Male 6 In. X Male 6 In. Tee Assembly.

1. Remove split ring (Figure 1, Item 29) from quick disconnect dust cap (Figure 1, Item 1).
2. Remove split ring (Figure 1, Item 29) from chain (Figure 1, Item 30).
3. Remove split ring (Figure 1, Item 31) from coupling (Figure 1, Item 3).
4. Remove split ring (Figure 1, Item 31) from chain (Figure 1, Item 30).
5. Remove split ring (Figure 1, Item 32) from quick disconnect dust cap (Figure 1, Item 4).
6. Remove split ring (Figure 1, Item 32) from chain (Figure 1, Item 33).
7. Remove split ring (Figure 1, Item 34) from coupling (Figure 1, Item 6).
8. Remove split ring (Figure 1, Item 34) from chain (Figure 1, Item 33).
9. Remove split ring (Figure 1, Item 35) from quick disconnect dust plug (Figure 1, Item 7).
10. Remove split ring (Figure 1, Item 35) from chain (Figure 1, Item 36).
11. Remove split ring (Figure 1, Item 37) from coupling (Figure 1, Item 9).
12. Remove split ring (Figure 1, Item 37) from chain (Figure 1, Item 36).
13. Remove quick disconnect dust cap (Figure 1, Item 1) and gasket (Figure 1, Item 2) from coupling (Figure 1, Item 3).
14. Remove quick disconnect dust cap (Figure 1, Item 4) and gasket (Figure 1, Item 5) from coupling (Figure 1, Item 6).
15. Remove quick disconnect dust plug (Figure 1, Item 7) and gasket (Figure 1, Item 8) from coupling (Figure 1, Item 9).

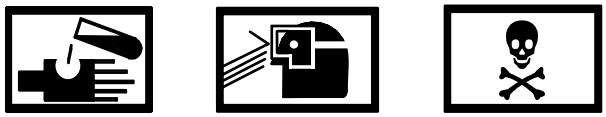
DISASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY (CAM-LOCK CONNECTOR) - CONTINUED

16. Discard gaskets (Figure 1, Items 2, 5 and 8).
17. Remove twelve nuts (Figure 1, Item 10), twelve lock washers (Figure 1, Item 11), twelve flat washers (Figure 1, Item 12), twelve bolts (Figure 1, Item 14), twelve flat washers (Figure 1, Item 13), coupling (Figure 1, Item 3) and gasket (Figure 1, Item 15) from tee (Figure 1, Item 16).
18. Discard gasket (Figure 1, Item 15) and lock washers (Figure 1, Item 11).
19. Remove twelve nuts (Figure 1, Item 17), twelve lock washers (Figure 1, Item 18), twelve flat washers (Figure 1, Item 19), twelve bolts (Figure 1, Item 20), twelve flat washers (Figure 1, Item 21), coupling (Figure 1, Item 6) and gasket (Figure 1, Item 22) from tee (Figure 1, Item 16).
20. Discard gasket (Figure 1, Item 22) and lock washers (Figure 1, Item 18).
21. Remove twelve nuts (Figure 1, Item 23), twelve lock washers (Figure 1, Item 24), twelve flat washers (Figure 1, Item 25), twelve bolts (Figure 1, Item 26), twelve flat washers (Figure 1, Item 27), coupling (Figure 1, Item 9) and gasket (Figure 1, Item 28) from tee (Figure 1, Item 16).
22. Discard gasket (Figure 1, Item 28) and lock washers (Figure 1, Item 24).

END OF TASK

CLEAN 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY COMPONENTS

1. Inspect tee for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect couplings and split rings for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
3. Inspect quick disconnect dust caps for cracks, corrosion or stripped threads. If cracks, corrosion or stripped threads are found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE TEE ASSEMBLY

1. Install twelve bolts (Figure 1, Item 26) and flat washers (Figure 1, Item 27) through coupling (Figure 1, Item 9), new gasket (Figure 1, Item 28) and tee (Figure 1, Item 16).
2. Install twelve flat washers (Figure 1, Item 25), twelve new lock washers (Figure 1, Item 24) and twelve nuts Figure 1, Item 23) on bolts (Figure 1, Item 26). Hand tighten twelve nuts (Figure 1, Item 23).
3. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 23) to 37–43 ft lb (50–58 N-m).
4. Install twelve bolts (Figure 1, Item 20) and flat washers (Figure 1, Item 21) through coupling (Figure 1, Item 6), new gasket (Figure 1, Item 22) and tee (Figure 1, Item 16).
5. Install twelve flat washers (Figure 1, Item 19), twelve new lock washers (Figure 1, Item 18) and twelve nuts (Figure 1, Item 17) on bolts (Figure 1, Item 20). Hand tighten eight nuts (Figure 1, Item 17).
6. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 17) to 37–43 ft lb (50–58 N-m).
7. Install twelve bolts (Figure 1, Item 14) and flat washers (Figure 1, Item 13) through coupling (Figure 1, Item 3), new gasket (Figure 1, Item 15) and tee (Figure 1, Item 16).
8. Install twelve flat washers (Figure 1, Item 12), twelve new lock washers (Figure 1, Item 11) and twelve nuts (Figure 1, Item 10) on bolts (Figure 1, Item 13). Hand tighten twelve nuts (Figure 1, Item 10).
9. Using torque wrench and adapter, torque twelve nuts (Figure 1, Item 10) to 37–43 ft lb (50–58 N-m).
10. Install new gasket (Figure 1, Item 8) and quick disconnect dust plug (Figure 1, Item 7) into coupling (Figure 1, Item 9).
11. Install new gasket (Figure 1, Item 5) and quick disconnect dust cap (Figure 1, Item 4) into coupling (Figure 1, Item 6).
12. Install new gasket (Figure 1, Item 2) and quick disconnect dust cap (Figure 1, Item 1) onto coupling (Figure 1, Item 3).
13. Install split ring (Figure 1, Item 37) on chain (Figure 1, Item 36).
14. Install split ring (Figure 1, Item 37) on coupling (Figure 1, Item 9).
15. Install split ring (Figure 1, Item 35) on chain (Figure 1, Item 36).
16. Install split ring (Figure 1, Item 35) on quick disconnect dust plug (Figure 1, Item 7).
17. Install split ring (Figure 1, Item 34) on chain (Figure 1, Item 33).
18. Install split ring (Figure 1, Item 34) on coupling (Figure 1, Item 6).
19. Install split ring (Figure 1, Item 32) on chain (Figure 1, Item 33).
20. Install split ring (Figure 1, Item 32) on quick disconnect dust cap (Figure 1, Item 4).
21. Install split ring (Figure 1, Item 31) on chain (Figure 1, Item 30).

ASSEMBLE FEMALE 6 IN. X MALE 6 IN. X MALE 6 IN TEE ASSEMBLY-CONTINUED

22. Install split ring (Figure 1, Item 31) on coupling (Figure 1, Item 3).
23. Install split ring (Figure 1, Item 29) on chain (Figure 1, Item 30).
24. Install split ring (Figure 1, Item 29) on quick disconnect dust cap (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1 IN. W/PRESSURE REGULATOR
PART NUMBER 64210
REPAIR

INITIAL SETUP:

Tools
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required
Quartermaster and Chemical Repairman 63J

Materials/Parts
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
O-ring (2) (WP 0166, Item 20)
Tape, teflon (WP 0165, Item 13)

Equipment Condition
Nozzle assembly removed from FSSP (WP 0109).

DISASSEMBLE 1 IN. FUEL AND OIL SERVICE NOZZLE ASSEMBLY (UNISEX DRY-BREAK COUPLING HALF)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 1 IN. FUEL AND OIL SERVICE NOZZLE ASSEMBLY (UNISEX DRY-BREAK COUPLING HALF) - CONTINUED

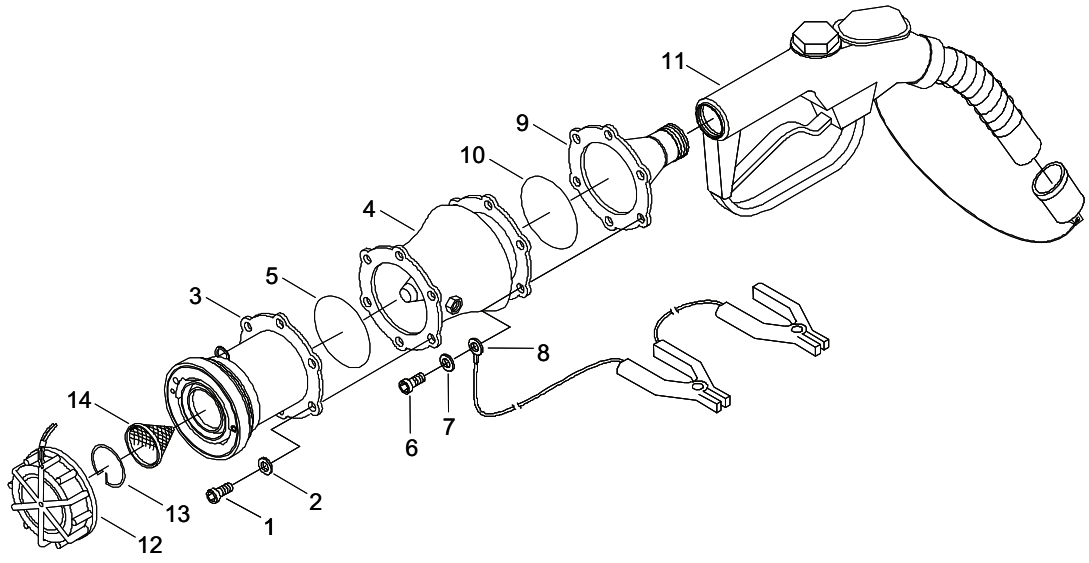


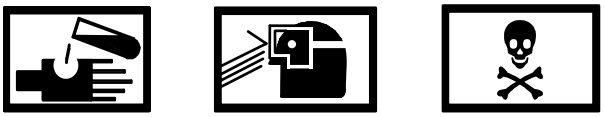
Figure 1. 1 In. Fuel and Oil Service Nozzle Assembly.

1. Remove screws (Figure 1, Item 1) and washers (Figure 1, Item 2) securing unisex dry-break coupling half (Figure 1, Item 3) to pressure regulator (Figure 1, Item 4).
2. Remove o-ring (Figure 1, Item 5) from hose end unisex dry-break coupling half (Figure 1, Item 3) and discard.
3. Remove screws (Figure 1, Item 6), washers (Figure 1, Item 7) and ground cable ring (Figure 1, Item 8) securing pressure regulator (Figure 1, Item 4) to nozzle adapter (Figure 1, Item 9).
4. Remove o-ring (Figure 1, Item 10) from pressure regulator (Figure 1, Item 4) and discard.
5. Use a strap wrench to remove nozzle adapter (Figure 1, Item 9) from nozzle (Figure 1, Item 11).
6. Remove dust cap (Figure 1, Item 12) from unisex dry-break coupling half (Figure 1, Item 3).
7. Remove snap ring (Figure 1, Item 13) from unisex dry-break coupling half (Figure 1, Item 3).
8. Remove strainer (Figure 1, Item 14) from unisex dry-break coupling half (Figure 1, Item 3).

END OF TASK

CLEAN 1 IN. FUEL AND OIL SERVICING NOZZLE ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or a parts cleaning brush and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

CLEAN NOZZLE ASSEMBLY STRAINER

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Clean strainer with a cleaning cloth and solvent cleaning compound.
2. Allow strainer to thoroughly dry.

END OF TASK

INSPECT 1 IN. FUEL AND OIL SERVICE NOZZLE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks and corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
2. Inspect quick disconnect coupling half for leakage or damage. If leakage or damage is found, replace coupling half.
3. Inspect ground wire assembly for frayed ground wire and for bent or inoperative grounding clamps. If ground wire is frayed or grounding clamps are bent or inoperative, replace with a serviceable ground wire assembly.
4. Inspect hose end control valve for evidence of damage. If damaged, replace with a serviceable like Item.

END OF TASK

INSPECT NOZZLE STRAINER

1. Inspect strainer for cracks, corrosion or damage. If cracks, corrosion or damage is found, replace with a serviceable like Item.
2. Inspect strainer for holes in the screen and deformation. If holes are found or strainer is deformed, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 1 IN. FUEL AND OIL SERVICE NOZZLE ASSEMBLY

1. Install strainer (Figure 1, Item 14) in unisex dry-break coupling half (Figure 1, Item 3).
2. Install snap ring (Figure 1, Item 13) in unisex dry-break coupling half (Figure 1, Item 3).
3. Install dust cap (Figure 1, Item 12) on unisex dry-break coupling half (Figure 1, Item 3)

A I N

Do not apply more than one and one half complete wraps of teflon tape to nozzle adapter. Failure to comply could result in cracking of the nozzle port.

4. Apply teflon tape to threads of nozzle adapter (Figure 1, Item 9).
5. Install nozzle adapter (Figure 1, Item 9) into nozzle (Figure 1, Item 11).
6. Use a strap wrench to tighten nozzle adapter (Figure 1, Item 9) on the nozzle (Figure 1, Item 11).
7. Install new o-ring (Figure 1, Item 10) on pressure regulator (Figure 1, Item 4).

N

Orientate breather assembly to a direction away from the fuel operator.

8. Align holes in pressure regulator (Figure 1, Item 4) with mounting holes in nozzle adapter (Figure 1, Item 9).
9. Install screws (Figure 1, Item 6), washers (Figure 1, Item 7) and ground cable ring (Figure 1, Item 8) to attach pressure regulator (Figure 1, Item 4) to nozzle adapter (Figure 1, Item 9). Tighten screws (Figure 1, Item 6).
10. Install new o-ring (Figure 1, Item 5) on unisex dry-break coupling half (Figure 1, Item 3) flange.

ASSEMBLE 1 IN. FUEL AND OIL SERVICE NOZZLE ASSEMBLY-CONTINUED

11. Align holes in unisex dry-break coupling half (Figure 1, Item 3) flange with mounting holes in pressure regulator (Figure 1, Item 4).
12. Install screws (Figure 1, Item 1) and washers (Figure 1, Item 2(to attach unisex dry-break coupling half (Figure 1, Item 3) to pressure regulator (Figure 1, Item 4). Tighten screws (Figure 1, Item 1).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, FUEL AND OIL SERVICE, 1.5 IN.
PART NUMBER 64199
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Tape, teflon (WP 0165, Item 14)

Equipment Condition

Nozzle assembly removed from FSSP (WP 0109).

DISASSEMBLE 1.5 IN. NOZZLE ASSEMBLY (VALVED UNISEX DRY-BREAK COUPLING HALF)

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 1.5 IN. NOZZLE ASSEMBLY (VALVED UNISEX DRY-BREAK COUPLING HALF) - CONTINUED

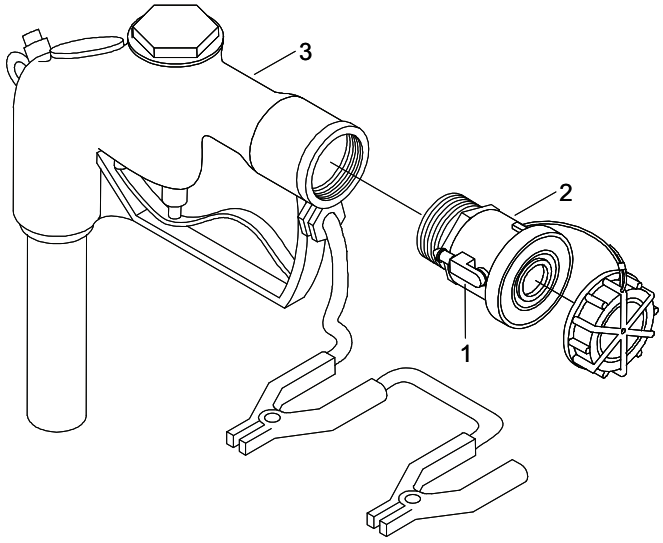


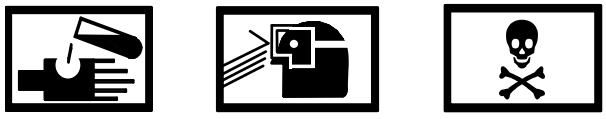
Figure 1. 1.5 In. Nozzle Assembly.

1. Position arm assembly (Figure 1, Item 1) to the closed position.
2. Use a strap wrench to remove (dry-break valve) coupling assembly (Figure 1, Item 2) from nozzle (Figure 1, Item 3).

END OF TASK

CLEAN 1.5 IN. NOZZLE ASSEMBLY COMPONENTS

WARNING



CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

INSPECT 1.5 IN. NOZZLE ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks and corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
2. Inspect (dry-break valve) coupling assembly for leakage or damage. If leakage or damage is found, Replace (dry-break valve) coupling assembly).
3. Inspect ground wire assembly for frayed ground wire and for bent or inoperative grounding clamps. If ground wire is frayed or grounding clamps are bent or inoperative, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 1.5 IN. NOZZLE ASSEMBLY

1. Apply teflon tape to threads of (dry-break valve) coupling assembly (Figure 1, Item 2).
2. Install (dry-break valve) coupling assembly (Figure 1, Item 2) into nozzle (Figure 1, Item 3).
3. Use a strap wrench to tighten (dry-break valve) coupling assembly (Figure 1, Item 2) onto the nozzle (Figure 1, Item 3).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1 UNISEX COUPLING
PART NUMBER 64201CF4GHX
STRAINER CLEANING

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Wrench, torque, 0-30 in. lb (WP 0162, Item 3)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Petrolatum technical (WP 0165, Item 9)
O-ring (WP 0166, Item 57)
O-ring (WP 0166, Item 58)

Equipment Condition

Nozzle assembly removed from FSSP (WP 0109).

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (VALVED QUICK DISCONNECT COUPLING HALF)

N

Repair is limited to replacement of parts found defective during inspection.

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (VALVED QUICK DISCONNECT COUPLING HALF)-CONTINUED

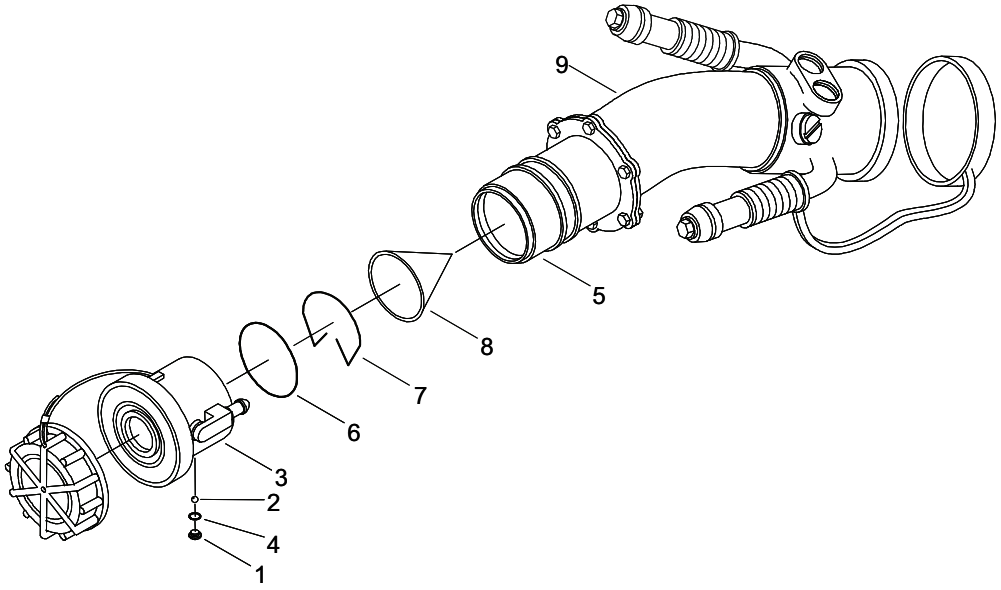


Figure 1. D-1 Nozzle Assembly.

1. Using a torque wrench and screwdriver bit, check running torque on screws (Figure 1, Item 1). If running torque is less than 3.5 in. lb (0.45 N-m), discard screw (Figure 1, Item 1).

N

Screw (Figure 1, Item 1) is a self-locking screw and is designed to be reused up to 15 times before replacement. If a torque wrench is not used to remove screw (Figure 1, Item 1), then screw (Figure 1, Item 1) should be replaced. Keep inlet hole in the up position when removing screw (Figure 1, Item 1) to prevent loss of ball bearings (Figure 1, Item 2) inside coupling (Figure 1, Item 3).

2. Remove screw (Figure 1, Item 1) from coupling (Figure 1, Item 3).
3. Remove o-ring (Figure 1, Item 4) from screw (Figure 1, Item 1).
4. Discard o-ring (Figure 1, Item 4).

N

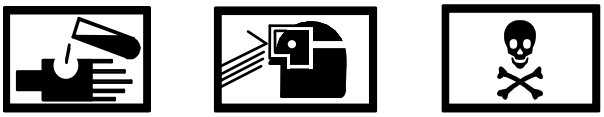
Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for during disassembly.

5. Hold coupling (Figure 1, Item 3) with screw hole toward cleaning cloth and rotate inlet fitting to allow ball bearings (Figure 1, Item 2) to fall onto the cleaning cloth.
6. Remove coupling (Figure 1, Item 3) from male adapter (Figure 1, Item 5).
7. Remove o-ring (Figure 1, Item 6) from coupling (Figure 1, Item 3).
8. Discard o-ring (Figure 1, Item 6).
9. Remove snap ring (Figure 1, Item 7) from male adapter (Figure 1, Item 5).
10. Remove strainer (Figure 1, Item 8) from male adapter (Figure 1, Item 5).

END OF TASK

CLEAN D-1 NOZZLE ASSEMBLY STRAINER

WARNING



CHEMICAL EYE PROTECTION POISON

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If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean strainer with a cleaning cloth and solvent cleaning compound.
2. Allow strainer to thoroughly dry.

END OF TASK

INSPECT D-1 NOZZLE ASSEMBLY STRAINER

1. Inspect all metallic parts for cracks, corrosion or damage. If cracks, corrosion or damage is found, replace with a serviceable like item.
2. Inspect coupling assembly and nozzle assembly for signs of leakage. If signs of leakage exist, replace D-1 nozzle assembly.

END OF TASK

INSTALL D-1 NOZZLE ASSEMBLY STRAINER

1. Install strainer (Figure 1, Item 8) in male adapter (Figure 1, Item 5).
2. Install snap ring (Figure 1, Item 7) in male adapter (Figure 1, Item 5).
3. Lightly lubricate new-o-ring (Figure 1, Item 6) with petrolatum and install o-ring (Figure 1, Item 6) in coupling (Figure 1, Item 3).
4. Install coupling (Figure 1, Item 3) on male adapter (Figure 1, Item 5).

N

Ensure all 41 ball bearings (Figure 1, Item 2) are accounted for before assembly.

5. Hold coupling (Figure 1, Item 3) over cleaning cloth with screw hole up and insert ball bearings (Figure 1, Item 2) into hole.
6. Lightly lubricate new o-ring (Figure 1, Item 2) with petrolatum and install o ring (Figure 1, Item 2) on screw (Figure 1, Item 1).
7. Install screw (Figure 1, Item 1) into coupling (Figure 1, Item 5).

INSTALL D-1 NOZZLE ASSEMBLY STRAINER-CONTINUED

8. Using torque wrench and screwdriver bit, torque screw (Figure 1, Item 1) to 25 in. LB (2.8 N-m).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1, FEMALE, CAMLOCK COUPLING, 4 IN.
PART NUMBER 64201CGH2MQ
STRAINER CLEANING

INITIAL SETUP:

Tools
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required
Quartermaster and Chemical Repairman 63J

Materials/Parts
Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)

Equipment Condition
Nozzle assembly removed from FSSP (WP 0109).

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (CAMLOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (CAMLOCK CONNECTOR)-CONTINUED

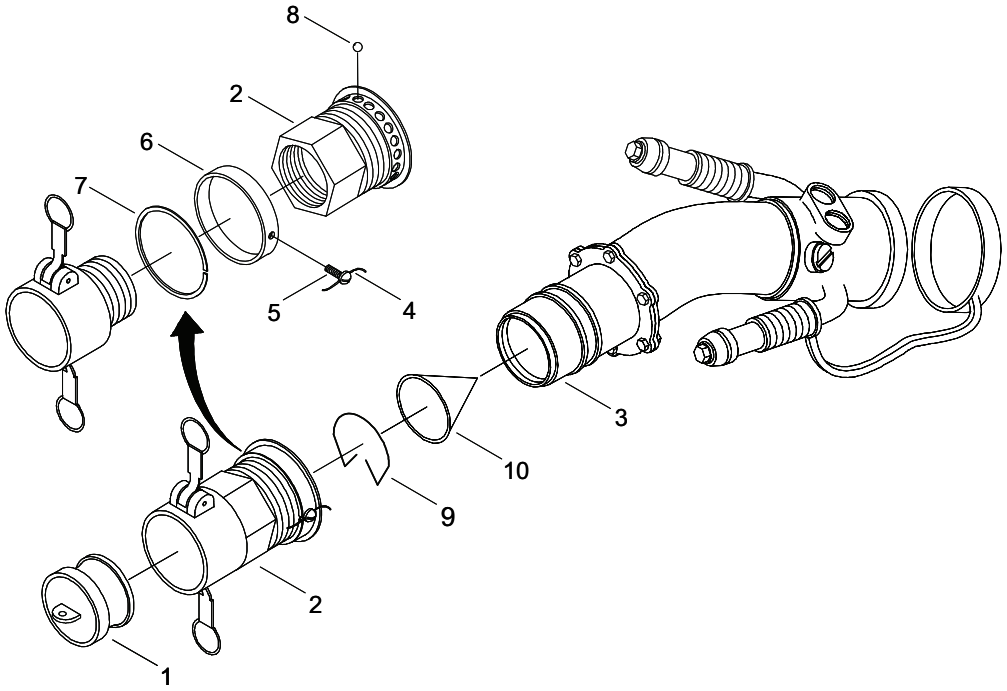


Figure 1. D1 Nozzle.

1. Remove dust plug (Figure 1, Item 1), from quick disconnect coupling (Figure 1, Item 2).
2. Remove lock wire (Figure 1, Item 4) from screws (Figure 1, Item 5).
3. Remove screws (Figure 1, Item 5) on retaining ring (Figure 1, Item 6).

A I N

Do not remove retaining ring or lock ring completely from assembly. Failure to do so can result in loss of ball bearings.

N

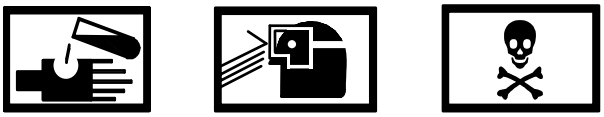
- Keep quick disconnect coupling over cleaning cloth when moving retaining ring to prevent loss of ball bearings.
- Ensure all 16 ball bearings are accounted for during assembly.

4. Move lock ring (Figure 1, Item 7) down to lowest notch.
5. Move retaining ring (Figure 1, Item 6) down far enough to release quick disconnect coupling (Figure 1, Item 2) from male adapter (Figure 1, Item 3).
6. Remove quick disconnect coupling (Figure 1, Item 2) from male adapter (Figure 1, Item 3).
7. Remove snap ring (Figure 1, Item 9) from male adapter (Figure 1, Item 3).
8. Remove strainer (Figure 1, Item 10) from male adapter (Figure 1, Item 3).

END OF TASK

CLEAN D-1 NOZZLE ASSEMBLY STRAINER

WARNING



CHEMICAL EYE PROTECTION POISON

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If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean strainer with a cleaning cloth and solvent cleaning compound.
2. Allow strainer to thoroughly dry.

END OF TASK

INSPECT D-1 NOZZLE ASSEMBLY STRAINER

1. Inspect all metallic parts for cracks, corrosion or damage. If cracks, corrosion or damage is found, replace with a serviceable like item.
2. Inspect quick disconnect coupling for signs of leakage. If signs of leakage exists, replace gasket in quick disconnect coupling as necessary (WP 0132).

END OF TASK

INSTALL D-1 NOZZLE ASSEMBLY STRAINER

1. Install strainer (Figure 1, Item 10) in male adapter (Figure 1, Item 3).
2. Install snap ring (Figure 1, Item 9) in male adapter (Figure 1, Item 3).

N

Ensure all 16 ball bearings (Figure 1, Item 8) are accounted for during disassembly.

3. Install quick disconnect coupling (Figure 1, Item 2) on male adapter (Figure 1, Item 3).
4. Move retaining ring (Figure 1, Item 6) up far enough to secure quick disconnect coupling (Figure 1, Item 2) on male adapter (Figure 1, Item 3).
5. Move lock ring (Figure 1, Item 7) up to highest notch.
6. Tighten screws (Figure 1, Item 5) on retaining ring (Figure 1, Item 6).
7. Install lock wire (Figure 1, Item 4) on screws (Figure 1, Item 5).
8. Install dust plug (Figure 1, Item 1) on quick disconnect coupling (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
NOZZLE ASSEMBLY, D-1, MALE, CAMLOCK COUPLING 4 IN.
PART NUMBER 64201CGH2KQ
STRAINER CLEANING

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Wire, non-electrical (WP 0165, Item 16)

Equipment Condition

Nozzle assembly removed from FSSP (WP 0109).

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (CAMLOCK CONNECTOR)

N

Repair is limited to replacement of parts found defective during inspection.

REMOVE D-1 NOZZLE ASSEMBLY STRAINER (CAMLOCK CONNECTOR)-CONTINUED

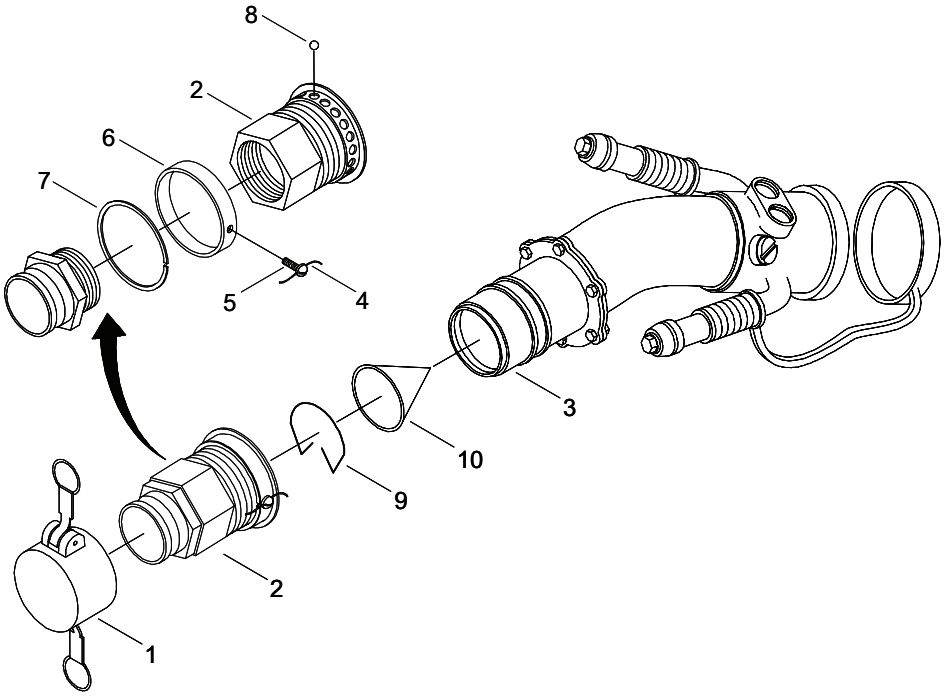


Figure 1. D-1 Nozzle.

1. Remove quick disconnect dust cap (Figure 1, Item 1), from quick disconnect couplings (Figure 1, Item 2).
2. Remove lock wire (Figure 1, Item 4) from screws (Figure 1, Item 5). Discard lock wire (Figure 1, Item 4).
3. Remove screws (Figure 1, Item 5) on retaining ring (Figure 1, Item 6).

A I N

Do not remove retaining ring completely from assembly. Failure to do so can result in loss of ball bearings.

N

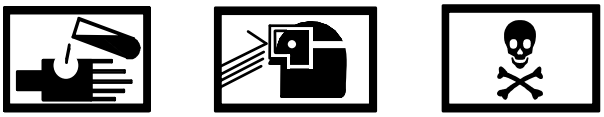
- Keep quick disconnect coupling (Figure 1, Item 2) over cleaning cloth when moving retaining ring (Figure 1, Item 6) to prevent loss of ball bearings (Figure 1, Item 8).
- Ensure all 16 ball bearings (Figure 1, Item 8) are accounted for during disassembly

4. Move lock ring (Figure 1, Item 7) down to lowest notch.
5. Move retaining ring (Figure 1, Item 6) down far enough to release quick disconnect coupling (Figure 1, Item 2) from male adapter (Figure 1, Item 3).
6. Remove quick disconnect coupling (Figure 1, Item 2) from male adapter (Figure 1, Item 3).
7. Remove snap ring (Figure 1, Item 9) from male adapter (Figure 1, Item 3).
8. Remove strainer (Figure 1, Item 10) from male adapter (Figure 1, Item 3).

END OF TASK

CLEAN D-1 NOZZLE ASSEMBLY STRAINER

WARNING



CHEMICAL EYE PROTECTION POISON

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If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean strainer with a cleaning cloth and solvent cleaning compound.
2. Allow strainer to thoroughly dry.

END OF TASK

INSPECT D-1 NOZZLE ASSEMBLY STRAINER

1. Inspect all metallic parts for cracks, corrosion or damage. If cracks, corrosion or damage is found, replace with a serviceable like item.
2. Inspect quick disconnect coupling for signs of leakage. If signs of leakage are found, replace with a serviceable like item.
3. Inspect nozzle assembly for signs of leakage. If signs of leakage are found, replace with a serviceable like item.

END OF TASK

INSTALL D-1 NOZZLE ASSEMBLY STRAINER

1. Install strainer (Figure 1, Item 10) in male adapter (Figure 1, Item 3).
2. Install snap ring (Figure 1, Item 9) in male adapter (Figure 1, Item 3).

N

Ensure all 16 ball bearings (Figure 1, Item 8) are accounted for during assembly.

3. Install quick disconnect coupling (Figure 1, Item 2) on male adapter (Figure 1, Item 3).
4. Move retaining ring (Figure 1, Item 6) up far enough to secure quick disconnect coupling (Figure 1, Item 2) on male adapter (Figure 1, Item 3).
5. Move lock ring (Figure 1, Item 7) up to highest notch.
6. Tighten screws (Figure 1, Item 5) on retaining ring (Figure 1, Item 6).
7. Install new lock wire (Figure 1, Item 4) on screws (Figure 1, Item 5).
8. Install quick disconnect dust cap (Figure 1, Item 1) on quick disconnect coupling (Figure 1, Item 2).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
REGULATOR, PRESSURE FEMALE, INLET 2 IN., UNISEX OUTLET, 2 IN.
PART NUMBER 64249
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cloth, cleaning (WP 0165, Item 5)
Packing (3) (WP 0166, Item 69)

Equipment Condition

Pressure regulator assembly removed from FSSP (WP 0109).

DISASSEMBLE 2 IN. FEMALE INLET PRESSURE REGULATOR

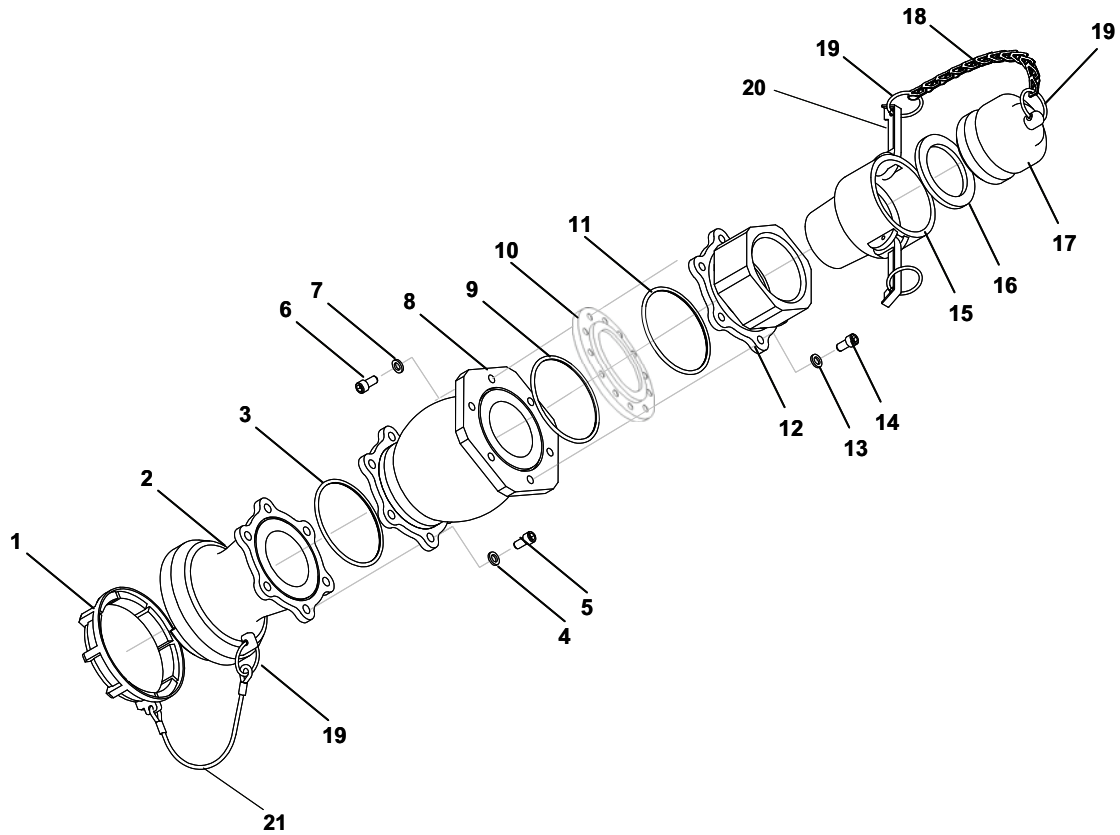


Figure 1. 2 In. Female Inlet, 2 In. Unisex Outlet Pressure Regulator.

1. Remove six bolts (Figure 1, Item 14) and six lock washers (Figure 1, Item 13) from 2 in. female inlet flange (Figure 1, Item 12).

DISASSEMBLE 2 IN. FEMALE INLET PRESSURE REGULATOR - CONTINUED

2. Remove six cap screws (Figure 1, Item 6) and six flat washers (Figure 1, Item 7) from pressure regulator (Figure 1, Item 8).
3. Separate 2 in. female inlet flange (Figure 1, Item 12) from pressure regulator (Figure 1, Item 8).
4. Discard packing (Figure 1, Items 9 and 11).
5. Retain spacer (Figure 1, Item 10) for reassembly process.

END OF TASK

DISASSEMBLE 2 IN. UNISEX OUTLET PRESSURE REGULATOR

WARNING

CHEMICAL EYE PROTECTION FIRE

When work with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

N

Repair is limited to replacement of parts found defective during inspection.

1. Remove six cap screws (Figure 1, Item 5) and six flat washers (Figure 1, Item 4) connecting the pressure regulator (Figure 1, Item 8) to the 2 in. unisex outlet (Figure 1, Item 2).
2. Remove 2 in. unisex outlet (Figure 1, Item 2) from pressure regulator (Figure 1, Item 8).
3. Remove and discard packing (Figure 1, Item 3) from the unisex outlet (Figure 1, Item 2).

END OF TASK

CLEAN 2 IN. FEMALE INLET, 2 IN. UNISEX OUTLET, PRESSURE REGULATOR COMPONENTS

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

CLEAN 2 IN. FEMALE INLET, 2 IN. UNISEX OUTLET, PRESSURE REGULATOR COMPONENTS - CONTINUED

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.
2. Clean all metallic parts with a cleaning cloth or parts cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

END OF TASK

INSPECT 2 IN. FEMALE INLET, 2 IN. UNISEX OUTLET, PRESSURE REGULATOR COMPONENTS

1. Inspect component for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like Item.
2. Inspect quick disconnect dust plug (Figure 1, Item 17), dust cap (Figure 1, Item 1), chain (Figure 1, Item 18) and wire rope (Figure 1, Item 21) for cracks or corrosion. If cracks or corrosion are found, replace with a serviceable like Item.
3. Inspect cam arms (Figure 1, Item 20) and split rings (Figure 1, Item 19) for cracks or corrosion. If cracks or corrosion is found, replace with a serviceable like Item.

END OF TASK

ASSEMBLE 2 IN. FEMALE INLET PRESSURE REGULATOR

1. Install new packing (Figure 1, Item 9) and align spacer (Figure 1, Item 10) on pressure regulator (Figure 1, Item 8).
2. Install six cap screws (Figure 1, Item 6) and six flat washers (Figure 1, Item 7) to spacer (Figure 1, Item 10).
3. Install new packing (Figure 1, Item 11) to spacer (Figure 1, Item 10).
4. Align 2 in. female inlet flange (Figure 1, Item 12) to spacer (Figure 1, Item 10).
5. Install six bolts (Figure 1, Item 14) and six lock washers (Figure 1, Item 13).

END OF TASK

ASSEMBLE 2 IN. UNISEX OUTLET PRESSURE REGULATOR

1. Install new packing (Figure 1, Item 3) on the pressure regulator (Figure 1, Item 8).
2. Align the holes on the pressure regulator (Figure 1, Item 8) with the holes in the 2 in. unisex outlet flange (Figure 1, Item 2).
3. Tighten the six cap screws (Figure 1, Item 5) and six flat washers (Figure 1, Item 4) to join the pressure regulator (Figure 1, Item 8) to the 2 in. unisex outlet (Figure 1, Item 2).
4. If the pressure regulator (Figure 1, Item 8) continues to malfunction refer to Sustainment Maintenance.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
STRAINER ASSEMBLY, IN-LINE 4 IN.
PARTNUMBER 735SBA4000ASAJ
REPAIR

INITIAL SETUP:

Tools

Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)
Lock washers (WP 0166, Item 62)
Gasket (WP 0166, Item 63)
Strainer (WP 0163, Item 63)

Equipment Condition

Strainer, In-Line assembly, 4 In. removed from FSSP (WP 0109).

DISASSEMBLE 4 IN. IN-LINE STRAINER ASSEMBLY

N

Repair is limited to replacement of parts found defective during inspection.

DISASSEMBLE 4 IN. IN-LINE STRAINER ASSEMBLY - CONTINUED

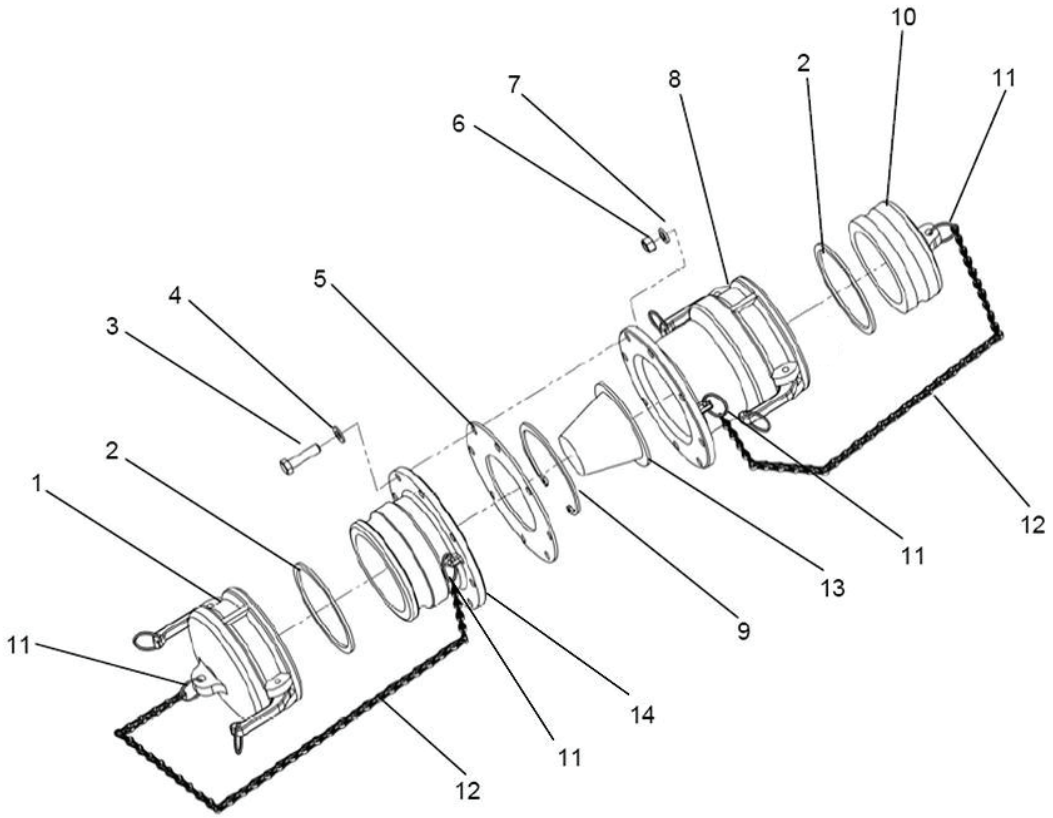


Figure 1. Strainer Assembly, In-line, 4 In.

1. Remove dust cap (Figure 1, Item 1) from male coupler assembly (Figure 1, Item 14).
2. Remove dust plug (Figure 1, Item 10) from male coupler assembly (Figure 1, Item 8).
3. Remove and discard gasket from dust cap (Figure 1, Item 2).
4. Remove and discard gasket from male coupler assembly (Figure 1, Item 8).

N

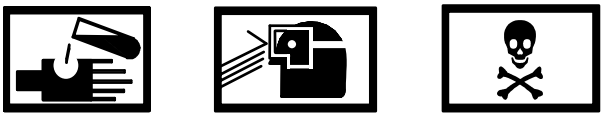
Repair is limited to replacement of parts found defective during inspection.

5. Remove chain (Figure 1, Item 12) from dust cap (Figure 1, Item 1) split ring (Figure 1, Item 11).
6. Remove chain (Figure 1, Item 12) from dust plug (Figure 1, Item 10) split ring (Figure 1, Item 11).
7. Remove eight nuts (Figure 1, Item 6) and eight flat washers (Figure 1, Item 7) from eight bolts (Figure 1, Item 3) and discard the eight lock washers (Figure 1, Item 4).
8. Discard gasket (Figure 1, Item 5).
9. Remove retaining ring (Figure 1, Item 9) from female coupler assembly (Figure 1, Item 8).
10. Separate strainer (Figure 1, Item 13) from female coupler assembly (Figure 1, Item 8).
11. Remove and replace cone strainer (Figure 1, Item 13) if damaged.

END OF TASK

CLEAN STRAINER ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or parts cleaning brush and solvent cleaning compound.
2. Allow parts to thoroughly dry.

END OF TASK

CLEAN STRAINER ASSEMBLY

WARNING

CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean strainer with a cleaning cloth and solvent cleaning compound.
2. Allow strainer to thoroughly dry.

END OF TASK

INSPECT STRAINER ASSEMBLY COMPONENTS

1. Inspect all metallic parts for cracks and corrosion. If cracks or corrosion is found, replace with a serviceable like Item.
2. Inspect coupler assembly for leakage or damage. If leakage or damage is found, replace coupling assembly.
3. Inspect retaining rings for corrosion or damage. If retaining rings are damaged, replace with serviceable retaining rings.
4. Inspect strainer for evidence of damage. If damaged, replace with a serviceable like Item.

END OF TASK

ASSEMBLE DISASSEMBLE 4 IN. IN-LINE STRAINER ASSEMBLY

1. Install cone strainer (Figure 1, Item 13) into female coupler assembly (Figure 1, Item 8).
2. Install retaining ring (Figure 1, Item 9) to the female coupler assembly (Figure 1, Item 8).
3. Install new gasket (Figure 1, Item 5) to the female coupler assembly (Figure 1, Item 8).
4. Align holes in male coupler assembly (Figure 1, Item 14) with holes in the female coupler assembly (Figure 1, Item 8).
5. Install bolts (Figure 1, Item 3), new lock washers (Figure 1, Item 7), flat washers (Figure 1, Item 4) and nuts (Figure 1, Item 6) to assemble the female coupler assembly (Figure 1, Item 8) to the male coupler assembly (Figure 1, Item 14). Tighten bolts (Figure 1, Item 3).
6. Install new gasket (Figure 1, Item 2) into dust cap (Figure 1, Item 1).
7. Install new gasket into female coupler assembly (Figure 1, Item 8).
8. Install dust cap (Figure 1, Item 1) onto male coupler assembly (Figure 1, Item 14).
9. Install dust plug (Figure 1, Item 10) into female coupler assembly (Figure 1, Item 8).
10. Connect chain (Figure 1, Item 12) to dust cap (Figure 1, Item 1) using split rings (Figure 1, Item 11).
11. Connect chain (Figure 1, Item 12) to dust plug (Figure 1, Item 10) using split rings (Figure 1, Item 11).
12. If strainer assembly still leaks, discard and replace.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
FLOW METER ASSEMBLY, IN-LINE, 6 IN.
PART NUMBER LD02021-006
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0-175 ft lb (WP 0162, Item 4)
Wrench, torque, 0-150 in. lb (WP 0162, Item 5)
Wrench, Allen, 5/32 (WP 0162, Item 13)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)
Adapter, socket wrench, 3/8 in. female square end, ½ in. male square end (WP 0162, Item 11)
Wrench, pipe (WP 0162, Item 12)

Personnel Required

(2) Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Pan, drain (WP 0165, Item 20)
Kit, fuel spill control (WP 0165, Item 8)
Cloth, cleaning (WP 0165, Item 5)
Petrolatum technical (WP 0165, Item 9)
Seal, lead (WP 0165, Item 10)
Wire (WP 0165, Item 15)
Sealing compound (WP 0165, Item 11)
Seal kit (WP 0166, Item 41)
Bearing insert kit (WP 0166, Item 40)
Washer, lock (12) (WP 0166, Item 61)
O-ring (2) (WP 0166, Item, 65)
O-ring (1) (WP 0166, Item 66)

Equipment Condition

Flow meter assembly removed from FSSP (WP 0109).

REMOVE REGISTER READOUT

REMOVE REGISTER READOUT - CONTINUED

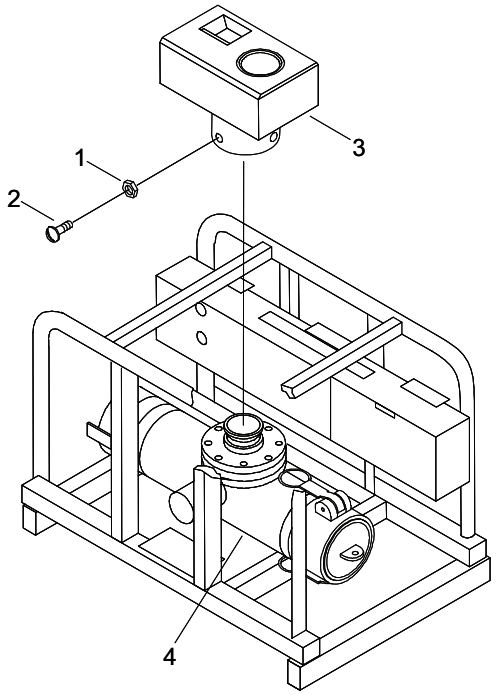


Figure 1. Register Readout.

1. Loosen three locknuts (Figure 1, Item 1) and three setscrews (Figure 1, Item 2) on register readout (Figure 1, Item 3).
2. Turn the register (Figure 1, Item 3) and remove from flow meter (Figure 1, Item 4).

END OF TASK

INSTALL REGISTER READOUT

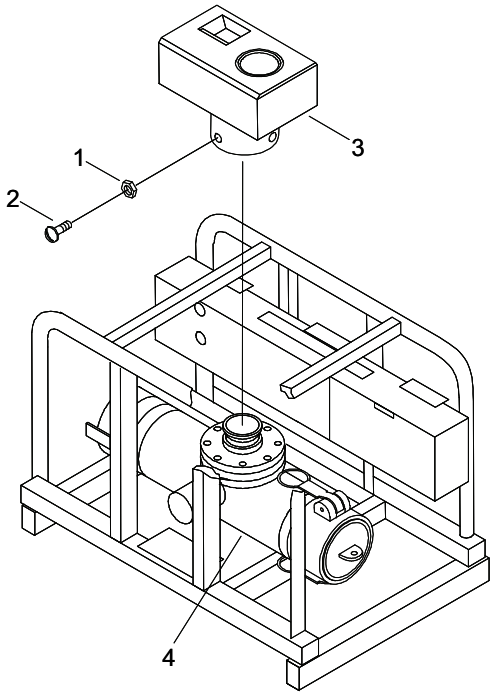


Figure 2. Register Readout.

1. Position register readout (Figure 2, Item 3) on flow meter (Figure 2, Item 4).
2. Install register readout (Figure 2, Item 3) by turning counterclockwise on flow meter (Figure 2, Item 4).
3. Using torque wrench and screwdriver bit, torque three setscrews (Figure 2, Item 2) to 40 in. lb (4.5 N-m).
4. Tighten three locknuts (Figure 2, Item 1) on register readout (Figure 2, Item 3).

END OF TASK

DISASSEMBLE 6 IN. IN-LINE FLOW METER ASSEMBLY

WARNING

CHEMICAL **EYE PROTECTION** **FIRE**

When working with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

DISASSEMBLE 6 IN. IN-LINE FLOW METER ASSEMBLY - CONTINUED

N

Repair is limited to replacement of components found defective during inspection.

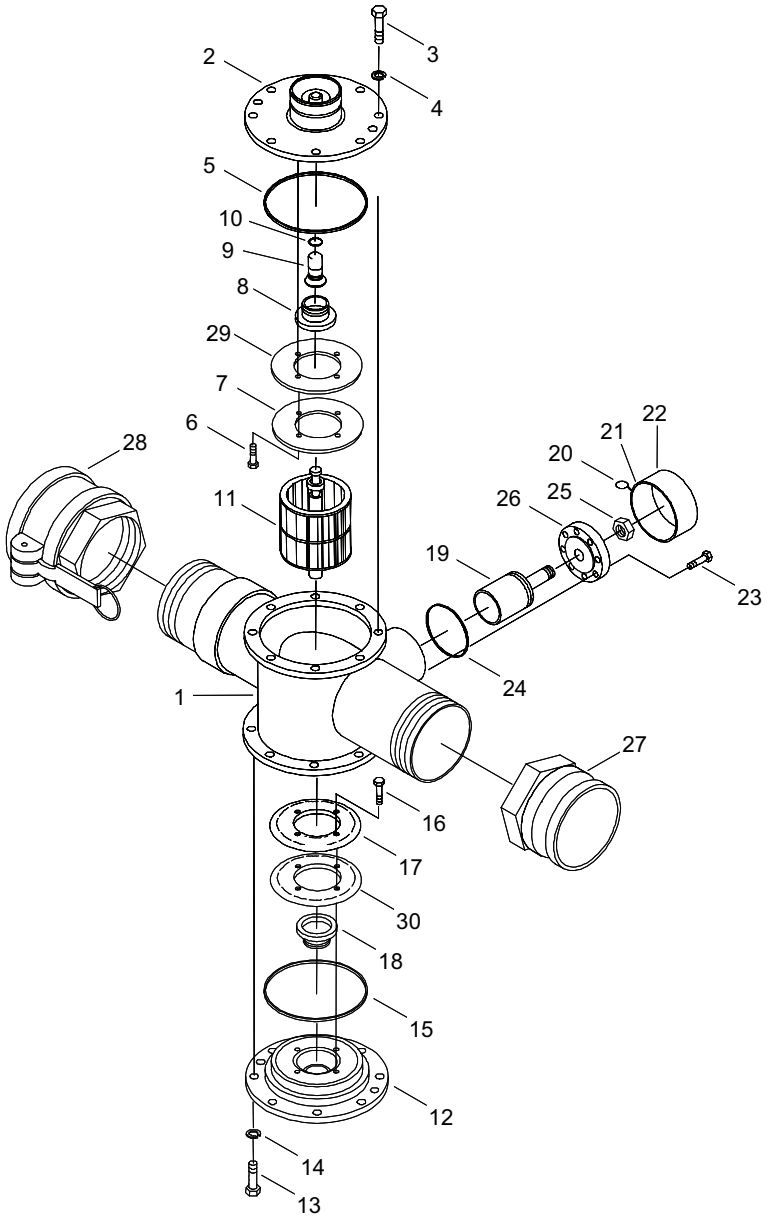


Figure 3. 6 In. In-line Flowmeter Assembly.

1. Position drain pans below flow meter (Figure 3, Item 1).

N

It is not necessary to remove the register readout during normal repairs.

END OF TASK

DISASSEMBLE TOP COVER

N

It may be necessary to use jack bolt holes to remove top cover. If Lead seal is attached to two bolts, cut and remove lead seal.

1. Remove top cover (Figure 3, Item 2) from flowmeter (Figure 3, Item 1).
   a. Remove eight bolts (Figure 3, Item 3) and eight lock washers (Figure 3, Item 4). Discard lock washers (Figure 3, Item 4).
   b. Remove top cover (Figure 3, Item 2).
2. Remove o-ring (Figure 3, Item 5) from top cover (Figure 3, Item 2). Discard o-ring (Figure 3, Item 5).
3. Disassemble top cover (Figure 3, Item 2).
   a. Remove four screws (Figure 3, Item 6) from top cover (Figure 3, Item 2).
   b. Remove throttle plate (Figure 3, Item 7) and spacer plate (Figure3, Item 29) from top cover (Figure 3, Item 2).

N

May be more than more one spacer plate on top cover

   c. Remove bearing insert (Figure 3, Item 8) from top cover (Figure 3, Item 2).
   d. Remove flowmeter diaphragm (Figure 3, Item 9) from top cover (Figure 3, Item 2).
   e. Remove o-ring (Figure 3, Item 10) from flowmeter diaphragm (Figure 3, Item 9). Discard o-ring (Figure 3, Item 10).

END OF TASK

REMOVE ROTOR AND SHAFT ASSEMBLY

A I N

During removal of rotor and shaft assembly, carefully pull the assembly out of the rear cover and the flowmeter taking care not to damage the bearings or the rotor cage. Damage to the rotor cage would be cause for replacement of the rotor and shaft assembly. The rotor and shaft assembly can only be replaced as a complete assembly.

1. Carefully pull outward on the rotor and shaft assembly (Figure 3, Item 11) to remove from flowmeter (Figure 3, Item 1).
2. Remove rotor and shaft assembly (Figure 3, Item 11) from flowmeter (Figure 3, Item 1).

END OF TASK

DISASSEMBLE REAR COVER

1. Remove flowmeter assembly from frame.
   a. Remove four bolts and four lock washers from bottom of rack.
   b. Remove flowmeter assembly from rack.

DISASSEMBLE REAR COVER - CONTINUED

N

It may be necessary to jack bolts to remove rear cover

2. Remove rear cover (Figure 3, Item 12) from flowmeter (Figure 3, Item 1). Discard lock washers (Figure 3, Item 14).
   a. Remove four bolts (Figure 3, Item 13) and four lock washers (Figure 3, Item 14) from rear cover (Figure 3, Item 12). Discard lock washers (Figure 3, Item 14).
   b. Remove rear cover (Figure 3, Item 12).
3. Remove o-ring (Figure 3, Item 15) from rear cover (Figure 3, Item 12). Discard o-ring (Figure 3, Item 15).
4. Disassemble rear cover (Figure 3, Item 12).
   a. Remove four screws (Figure 3, Item 16) from rear cover (Figure 3, Item 12).

N

May be more than one spacer plate on rear cover

   b. Remove throttle plate (Figure 3, Item 17) and spacer plate (Figure 3, Item 30) from rear cover (Figure 3, Item 12).
   c. Remove bearing insert (Figure 3, Item 18) from rear cover (Figure 3, Item 12).

END OF TASK

REMOVE CALIBRATION PLUG

1. Remove calibration plug (Figure 3, Item 19) from flowmeter (Figure 3, Item 1).
   a. Remove lead seal (Figure 3, Item 20) and wire (Figure 3, Item 21) from calibration plug cover (Figure 3, Item 22). Discard lead seal (Figure 3, Item 20) and wire (Figure 3, Item 21).
   b. Remove calibration plug cover (Figure 3, Item 22) from calibration plug (Figure 3, Item 19).
   c. Remove eight bolts (Figure 3, Item 23) from calibration plug (Figure 3, Item 19).

N

To maintain manufacturer's calibration, it is required prior to removing the base plate, mark the location of the calibration plug stem to ensure the location of the plug does not change during disassembly. The adjustment will only be to plus or minus 3% of nominal and basically will allow compensation for the manufacturing variances in the rotating group and bores.

N

If calibration plug is found to be damaged, measure the length of the threaded rod extension before it was removed. Duplicate the dimension on the replacement plug and lock it down and recap.

   d. Remove calibration plug (Figure 3, Item 19) by pulling straight up on calibration plug cover.

REMOVE CALIBRATION PLUG - CONTINUED

2. Remove o-ring (Figure 3, Item 24) from calibration plug (Figure 3, Item 19). Discard o-ring (Figure 3, Item 24).
3. Remove nut (Figure 3, Item 25) and base plate (Figure 3, Item 26) from calibration plug (Figure 3, Item 19).
4. Remove drain pans and dispose of contents per local procedures.

END OF TASK

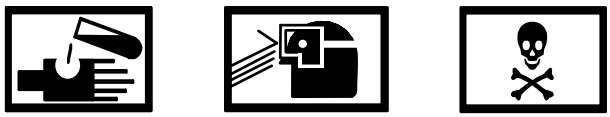
REMOVE 6 IN. MALE AND FEMALE CAM AND GROOVE

1. Using pipe wrench, remove male cam and groove coupling (Figure 3, Item 27) from flowmeter (Figure 3, Item 1).
2. Using pipe wrench, remove female cam and groove coupling (Figure 3, Item 28) from flowmeter (Figure 3, Item 1).

END OF TASK

CLEAN 6 IN. IN-LINE FLOW-METER ASSEMBLY COMPONENTS

WARNING



CHEMICAL EYE PROTECTION POISON

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

1. Using cleaning cloth lightly dampened with solvent cleaning compound, wipe the register readout mounting area, flowmeter, top cover, rear cover, calibration plug and calibration plug cover free of fuel and dirt.
2. Using a dry cleaning cloth, wipe the rotor and shaft free of fuel and dirt.

END OF TASK

INSPECT 6 IN. IN-LINE FLOW METER ASSEMBLY COMPONENTS

1. Inspect the flow meter housing for cracks, corrosion, nicks, burrs and scratches. If cracks, corrosion, nicks, burrs or scratches are found, replace with a serviceable like item.
2. Inspect the top and rear covers for cracks, corrosion, nicks, burrs and scratches. If cracks, corrosion, nicks, burrs or scratches are found, replace with a serviceable like item.
3. Inspect the inserts in the top and rear covers for cracks, corrosion, nicks, burrs, scratches, roughness and excessively worn conditions. If cracks, nicks, burrs, scratches, roughness or excessively worn conditions are found, replace with a serviceable like item.

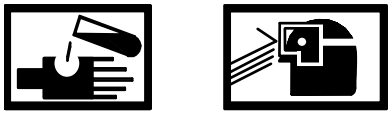
INSPECT 6 IN. IN-LINE FLOW METER ASSEMBLY COMPONENTS - CONTINUED

4. Inspect the flow meter diaphragm for cracks, nicks, burrs and scratches. If cracks, corrosion, nicks, burrs or scratches are found, replace with a serviceable like item.
5. Inspect throttle plate and throttle plate spacers for cracks, corrosion, nicks, burrs, scratches, roughness and excessively worn conditions. If cracks, corrosion, nicks, burrs, scratches, roughness or excessively worn conditions are found, replace with a serviceable like item.
6. Inspect the calibration plug for cracks, corrosion, nicks, burrs and scratches. If cracks, corrosion, nicks, burrs or scratches are found, replace with a serviceable like item.
7. Inspect the calibration plug cover for excessive wear and tear. If excessive wear and tear is found, replace with a serviceable like item.
8. Inspect the rotor and shaft assembly for worn or rough bearings. If worn or rough bearings are found, replace with a serviceable like item.
9. Inspect the rotor cage for cracks, corrosion, nicks, burrs, scratches, roughness and excessively worn conditions. If cracks, corrosion, nicks, burrs, scratches, roughness and excessively worn conditions are found, replace with a serviceable like item.
10. Inspect the male and female coupling ends for damaged threads, worn or damaged clips, nicks, crack, corrosion, burrs and scratches. If damaged threads, worn or damaged clips, nicks, crack, corrosion, burrs and scratches are found, replace with a serviceable like item.

END OF TASK

INSTALL 6 IN. MALE AND FEMALE CAM AND GROOVE

WARNING



CHEMICAL EYE PROTECTION

When working with sealing compound, avoid contact with eyes or skin. Wear protective rubber gloves and chemical splash goggles. Avoid breathing vapors. Use with adequate ventilation.

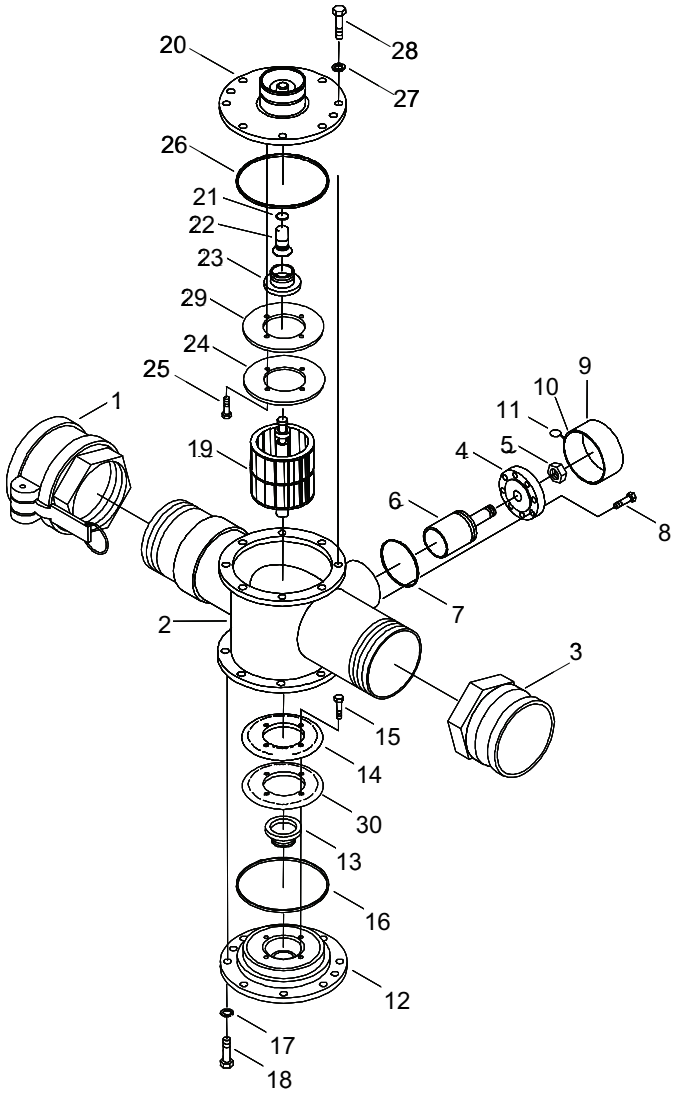


Figure 4. 6 In. In-line Flowmeter Assembly.

1. Apply sealing compound to threads of female cam and groove coupling (Figure 4, Item 1) and flowmeter (Figure, 4, Item 2).

INSTALL 6 IN. MALE AND FEMALE CAM AND GROOVE - CONTINUED

2. Using pipe wrench, install female cam and groove coupling (Figure 4, Item 1) on flowmeter (Figure 4, Item 2). Tighten female cam and groove coupling (Figure 4, Item 1).
3. Apply sealing compound to threads of male cam and groove coupling (Figure 4, Item 3) and flow meter (Figure, 4, Item 2).
4. Using pipe wrench, install male cam and groove coupling (Figure 4, Item 3) on flowmeter (Figure 4, Item 2). Tighten male cam and groove coupling (Figure 4, Item 3).

END OF TASK

INSTALL CALIBRATION PLUG

N

TMDE requiring manufacturer's calibration or repair of the flow meter will be arranged by the supporting activity. If the TMDE is under warranty, the owner/user will arrange for support and send it to the manufacturer for service.

N

Allow all parts to dry thoroughly before assembling them.

1. Install base plate (Figure 4, Item 4) and nut (Figure 4, Item 5) on calibration plug (Figure 4, Item 6). Tighten nut (Figure 4, Item 5).
2. Install calibration plug (Figure 4, Item 6) into flowmeter (Figure 4, Item 2).
   a. Apply a thin coat of petrolatum on new o-ring (Figure 4, Item 7) and install on calibration plug (Figure 4, Item 6).
   b. Position calibration plug (Figure 4, Item 6) on flowmeter (Figure 4, Item 2).
   c. Install eight bolts (Figure 4, Item 8) to secure calibration plug (Figure 4, Item 6) to flow meter (Figure 4, Item 2).
   d. Using torque wrench and adapter, torque eight bolts (Figure 4, Item 8) using standard torque table (WP 0159).
   e. Position calibration plug cover (Figure 4, Item 9) on calibration plug (Figure 4, Item 6).
   f. Using wire twister pliers, install new wire (Figure 4, Item 10) and new lead seal (Figure 4, Item 11) to secure calibration plug cover (Figure 4, Item 9) to flowmeter (Figure 4, Item 2).

END OF TASK

ASSEMBLE REAR COVER

1. Assemble rear cover (Figure 4, Item 12).
   a. Install bearing insert (Figure 4, Item 13) into rear cover (Figure 4, Item 12).

N

There can be more than one spacer plate on rear cover assembly

   b. Position throttle plate (Figure 4, Item 14) and spacer plates (Figure 4, Items 30) on rear cover (Figure 4, Item 12).

ASSEMBLE REAR COVER - CONTINUED

c. Install four screws (Figure 4, Item 15) to secure throttle plate (Figure 4, Item 14) to rear cover (Figure 4, Item 12). Tighten screws (Figure 4, Item 15).

2. Install rear cover (Figure 4, Item 12) onto flowmeter (Figure 4, Item 2).
   a. Apply a thin coat of petrolatum on new o-ring (Figure 4, Item 16) and install on rear cover (Figure 4, Item 12).
   b. Position rear cover (Figure 4, Item 12) on flowmeter (Figure 4, Item 2).
   c. Install four new lock washers (Figure 4, Item 17) and four bolts (Figure 4, Item 18) to secure rear cover (Figure 4, Item 12) to flowmeter (Figure 4, Item 2).
   d. Using torque wrench and adapter, torque four bolts (Figure 4, Item 17) using standard torque table (WP 0159).

END OF TASK

ASSEMBLE AND INSTALL ROTOR AND SHAFT

1. Reinstall flowmeter assembly back on the frame.
   a. Install four bolts and four lock washers on the bottom of rack.
   b. Place flowmeter assembly on rack.

A I N

During installation of rotor and shaft assembly, carefully push the assembly into the rear cover and the flowmeter, taking care not to damage the bearings or the rotor cage. Damage to the rotor cage would be cause for replacement of the rotor and shaft assembly. The rotor and shaft assembly can only be replaced as a complete assembly.

2. Align the rotor and shaft assembly (Figure 4, Item 19) in the flowmeter (Figure 4, Item 2) housing.
3. While pushing inward on the rotor and shaft assembly (Figure 4, Item 19), install the rotor and shaft assembly (Figure 4, Item 19) into flowmeter (Figure 4, Item 2).

END OF TASK

ASSEMBLE AND INSTALL TOP COVER

1. Assemble top cover (Figure 2, Item 20).
   a. Apply a thin coat of petrolatum on new o-ring (Figure 4, Item 21) and install o-ring (Figure 4, Item 21) on flow meter diaphragm (Figure 4, Item 22).
   b. Position flow meter diaphragm (Figure 4, Item 22) on top cover (Figure 4, Item 20).

N

More than one spacer plate may be present.

   c. Install bearing insert (Figure 4, Item 23) into top cover (Figure 4, Item 20).
   d. Position throttle plate (Figure 4, Item 24) and spacer plates (Figure 4, Item 29) on top cover (Figure 4, Item 20).

ASSEMBLE AND INSTALL TOP COVER - CONTINUED

e. Install four screws (Figure 4, Item 25) to secure throttle plate (Figure 4, Item 24) to top cover (Figure 4, Item 20). Tighten screws (Figure 4, Item 25).

N

If it was necessary to remove lead seal from top cover, reinstall new lead seal.

2. Install top cover (Figure 4, Item 20) onto flowmeter (Figure 4, Item 2).
   a. Apply a thin coat of petrolatum on new o-ring (Figure 4, Item 26) and install new o-ring on top cover (Figure 4, Item 20).
   b. Position top cover (Figure 4, Item 20) on flowmeter (Figure 4, Item 2).
   c. Install eight new lock washers (Figure 4, Item 27) and eight bolts (Figure 4, Item 28) to secure top cover (Figure 4, Item 20) to flowmeter (Figure 4, Item 2).
   d. Using torque wrench and adapter, torque eight bolts (Figure 4, Item 28) using standard torque table (WP 0159).

END OF TASK

INSTALL REGISTER READOUT

1. Install register readout (WP 0154, Steps 1 through 4).

WARNING

CHEMICAL **EYE PROTECTION** **VAPOR** **POISON**

When working with fuel additives, avoid contact with eyes or skin. Wear protective rubber gloves or other impermeable gloves and chemical splash goggles. Avoid breathing of vapors. Use only with adequate ventilation. Use respirator as needed. Protective clothing should be worn when using fuel additives and an eye wash station and safety shower should be available. Can be toxic, harmful or fatal, if absorbed through skin or inhaled in large quantities. May irritate respiratory tract. Can affect central nervous system. Ingestion can cause pulmonary edema, hemorrhaging and/ or be fatal.

2. Clean up spilled fluids with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.

END OF TASK

END OF WORK PACKAGE

CHAPTER 7

SUSTAINMENT MAINTENANCE TROUBLESHOOTING PROCEDURES FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

SUSTAINMENT MAINTENANCE
SUSTAINMENT SUPPORT MASTER MALFUNCTION/SYMPTOM INDEX

MALFUNCTION/SYMPTOM	TROUBLESHOOTING PROCEDURE
COMPONENTS	
Regulator, Pressure, Female Inlet 2 IN., Unisex Outlet 2 In. Part Number 64249-55	WP 0156

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
REGULATOR, PRESSURE, FEMALE INLET 2 IN., UNISEX OUTLET 2 IN.
PART NUMBER 64249-55
TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

Tools
Gloves, rubber, industrial (WP 0166, Item 18)
Goggles, industrial (WP 0166, Item 17)

References
WP 0014
WP 0157

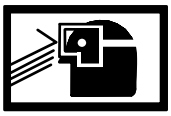
Personnel Required
Quartermaster and Chemical Repairman 63J
Petroleum Supply Specialist 92F

TROUBLESHOOTING PROCEDURE

2 IN. FEMALE INLET, 2 IN. UNISEX OUTLET, PRESSURE REGULATOR, PART NUMBER 64249-55, LEAKS DURING OPERATION

WARNING


CHEMICAL


EYE PROTECTION

Wear chemical gloves and eye protection before starting this troubleshooting procedure.

SYMPTOM

Pressure Regulator leaks.

MALFUNCTION

Pressure Regulator leaks.

CORRECTIVE ACTION

1. Repair Pressure Regulator (WP 0157).
2. Perform operational checkout of the FSSP (WP 0014) after installation.

END OF TASK

END OF WORK PACKAGE

CHAPTER 8

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

SUSTAINMENT INSTRUCTIONS
REGULATOR, PRESSURE VALVE
PART NUMBER 40680-55
REPAIR

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Standard Automotive Tool Set (SATS) (WP 0162, Item 2)
Wrench, torque, 0–30 in. lb (WP 0162, Item 3)
Rod, threaded, 10-24 thread size, 2 ft length (WP 0162, Item 6)
Nut, hex (10-24 thread) (WP 0162, Item 7)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Personnel Required

Quartermaster and Chemical Repairman 63J

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Kit, fuel spill control (WP 0165, Item 8)
Pan, drain (2) (WP 0165, Item 20)
Cloth, cleaning (WP 0165, Item 5)
Sealing compound, (WP 0165, Item 12)
Isopropyl alcohol, technical (WP 0165, Item 7)
Screw (WP 0166, Item 42)
Packing (WP 0166, Item 1)
Seal, outer piston (WP 0166, Item 32)
O-ring (WP 0166, Item 51)
Quad ring (WP 0166, Item 26)
O-ring (WP 0166, Item 54)
Spring, helical, compression (WP 0166, Item 22)
Gasket (2) (WP 0166, Item 4)
O-ring (2) (WP 0166, Item 48)

Equipment Condition

Regulator, Pressure assembly removed from FSSP (WP 0109)
Nozzle, Assembly, Fuel and Oil Service, 1 in. removed from pressure regulator (WP 0147)
Nozzle Assembly, D-1 Unisex Coupling removed from pressure regulator (WP 0149)
Regulator, Pressure Valve removed from Female, Inlet 2 in., Unisex Outlet, 2 in. (WP 0152)

DISASSEMBLE PRESSURE REGULATOR VALVE

WARNING

CHEMICAL EYE PROTECTION FIRE

When work with fuel, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use only with adequate ventilation. Overexposure can irritate digestive tract. Aspiration into lungs may cause hemorrhaging.

DISASSEMBLE PRESSURE REGULATOR VALVE – CONTINUED

N

Repair is limited to replacement of parts found defective during inspection.

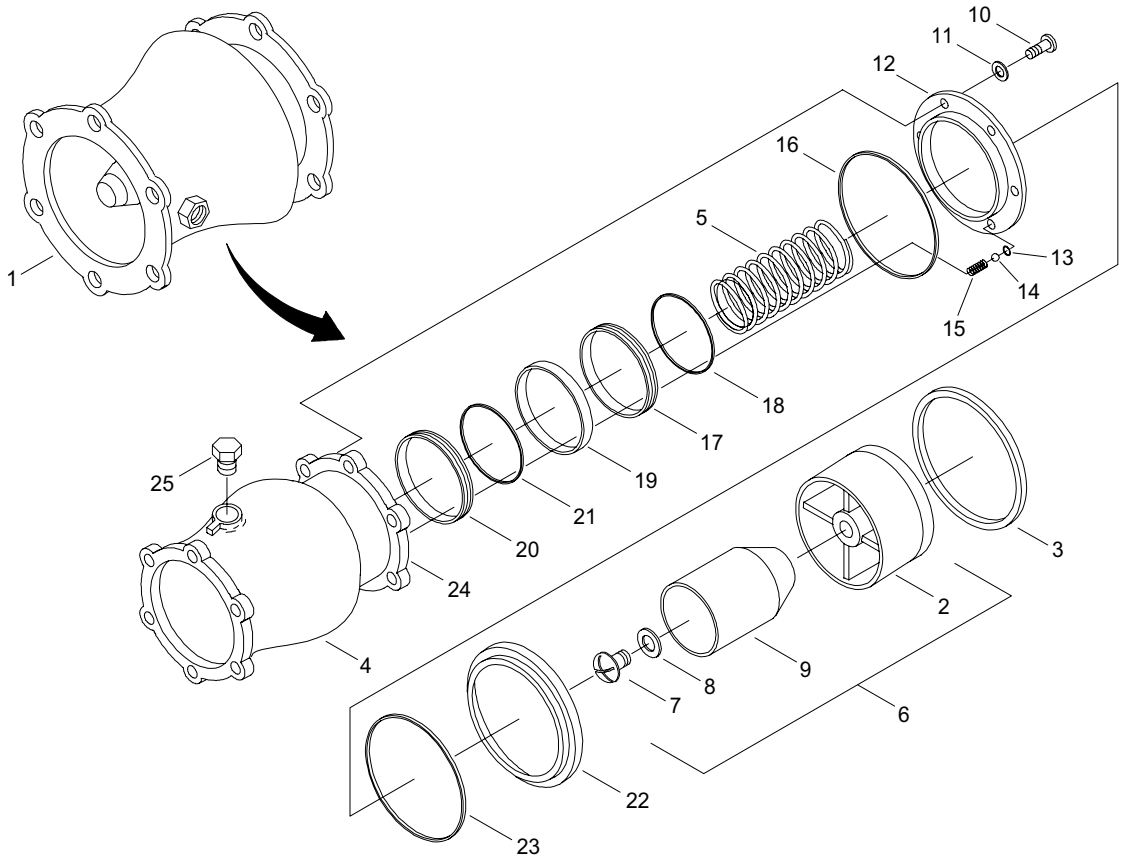
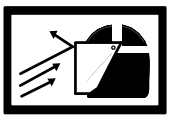


Figure 1. Pressure Regulator Valve.

1. Place drain pans under pressure regulator valve (Figure 1, Item 1).

WARNING



FLYING PARTICLES

Do not point valve toward the body when removing retaining ring. The piston is under 65 in. lb (7.3 N-m) load and could cause serious injury to personnel and damage to equipment if load is improperly released.

2. Depress outer piston (Figure 1, Item 2) to relieve pressure on retaining ring (Figure 1, Item 3).
3. Remove retaining ring (Figure 1, Item 3) from pressure regulator valve housing (Figure 1, Item 4).

DISASSEMBLE PRESSURE REGULATOR VALVE – CONTINUED

4. Slowly release pressure from the spring (Figure 1, Item 5) to force the piston assembly (Figure 1, Item 6) from the pressure regulator valve housing (Figure 1, Item 4).
5. Remove piston assembly (Figure 1, Item 6) from the pressure regulator valve housing (Figure 1, Item 4).
6. Disassemble piston assembly (Figure 1, Item 6).
   a. Remove screw (Figure 1, Item 7) and packing (Figure 1, Item 8) to separate outer piston (Figure 1, Item 2) from inner piston (Figure 1, Item 9).
   b. Discard screw (Figure 1, Item 7) and packing (Figure 1, Item 8).
7. Remove spring (Figure 1, Item 5).

N

Screws (Figure 1, Item 10) are self-locking screw and are designed to be reuse numerous times before replacement. If a torque wrench is not used to check running torque while removing screws (Figure 1, Item 10), then screws (Figure 1, Item 10) should be replaced.

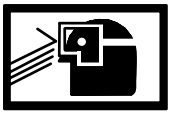
Use caution when removing screws from seal retainer. There is a small ball and spring retained by this seal. Do not lose ball.

8. Remove four screws (Figure 1, Item 10) and four washers (Figure 1, Item 11) securing seal retainer (Figure 1, Item 12) to the pressure regulator valve housing (Figure 1, Item 4).
   a. Using a torque wrench and screwdriver bit, check running torque while removing four screws (Figure 1, Item 10). If running torque is less than 1.5 in. lb (0.16 N-m), discard screw (Figure 1, Item 10).
   b. Remove and retain four washers (Figure 1, Item 11).
9. Remove seal retainer (Figure 1, Item 12), quad ring (Figure 1, Item 13), ball (Figure 1, Item 14) and spring (Figure 1, Item 15). Discard quad ring (Figure 1, Item 13) and spring (Figure 1, Item 15).
10. Remove and discard o-ring (Figure 1, Item 16).
11. Remove and discard gasket (Figure 1, Item 17) and o-ring (Figure 1, Item 18).
12. Remove seal spacer (Figure 1, Item 19).
13. Remove and discard gasket (Figure 1, Item 20) and o-ring (Figure 1, Item 21).
14. Remove and discard seal (Figure 1, Item 22) and o-ring (Figure 1, Item 23) from hose end control valve housing outlet (Figure 1, Item 24).
15. Remove breather assembly (Figure 1, Item 25).
16. Remove drain pans and dispose of contents in accordance with local procedures.

END OF TASK

CLEAN PRESSURE REGULATOR VALVE COMPONENTS

WARNING


CHEMICAL **EYE PROTECTION** **POISON**

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician immediately.

If foreign objects enter your eye, you may be injured always wear protective goggles when scraping Items with a putty knife.

1. Clean all metallic parts with a cleaning cloth or parts cleaning brush and solvent cleaning compound.
2. Clean breather assembly filter screen by flushing vigorously with solvent cleaning compound.
3. Allow parts to dry thoroughly.

END OF TASK

INSPECT PRESSURE REGULATOR VALVE COMPONENTS

1. Inspect housing and housing mating surfaces for cracks, gouges, sharp edges or corrosion. If cracks, gouges, sharp edges or corrosion is found, replace with a serviceable like item.

N

Pistons must be free of surface scratches and damage as it will cause excessive leakage during usage.

2. Inspect outer and inner pistons surfaces for scratches. If scratches are found replace with a serviceable like item.
3. Inspect breather assembly filter screen for damage or clogged condition. If damaged or clogged, replace pressure regulator valve.

END OF TASK

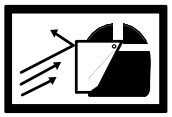
ASSEMBLE PRESSURE REGULATOR VALVE

A I N

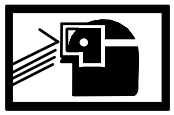
Do not lubricate any seals and o-rings, with the exception of packing and breather plug prior to installation. Failure to comply may cause malfunction of pressure regulator valve.

1. Install breather assembly (Figure 1, Item 25) into hose end control valve housing (Figure 1, Item 4). Tighten breather assembly (Figure 1, Item 25).
2. Install new seal (Figure 1, Item 22) with new o-ring (Figure 1, Item 23) into hose end control valve housing outlet (Figure 1, Item 24).
3. Install new gasket (Figure 1, Item 20) with new o-ring (Figure 1, Item 21).
4. Install seal spacer (Figure 1, Item 19).
5. Install new gasket (Figure 1, Item 17) with new o-ring (Figure 1, Item 18).
6. Install new o-ring (Figure 1, Item 16) in groove of outer piston (Figure 1, Item 2).

WARNING



FLYING PARTICLES



EYE PROTECTION

Flying particles from lapping procedures could cause damage to eyes. Wear eye protection during lapping procedures. Failure to comply could cause serious injury or death.

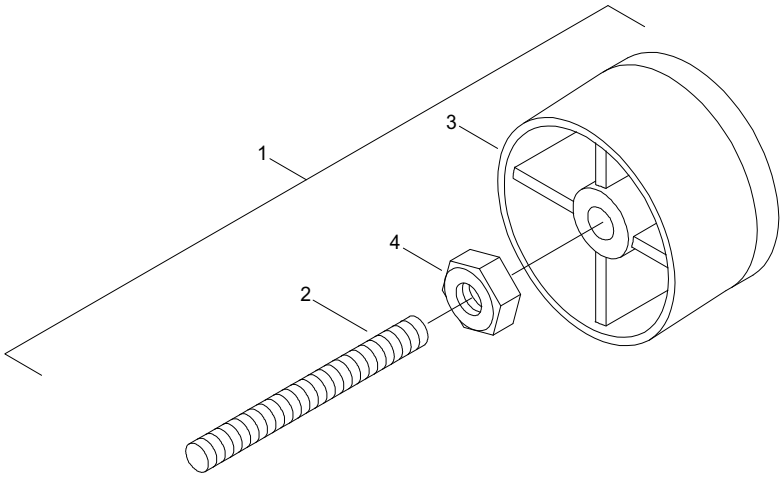


Figure 2. Outer Piston Assembly.

7. Perform lapping of seal (Figure 1, Item 22).
   a. Assemble lapping jig (Figure 2, Item 1).
   b. Install a 10-24 UNC set screw (Figure 2, Item 2) (threaded rod may be used) into outer piston (Figure 2, Item 3).

ASSEMBLE PRESSURE REGULATOR VALVE - CONTINUED

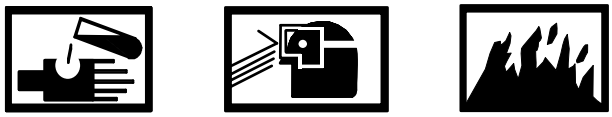
c. Install hex nut (Figure 2, Item 4) onto set screw (Figure 2, Item 2). Tighten hex nut (Figure 2, Item 4).

d. Insert lapping jig (Figure 2, Item 1) into a variable speed hand drill.

e. Position pressure regulator valve housing (Figure 1, Item 4) into a bench vise. Hand tighten bench vise, being careful not to damage the pressure regulator valve housing (Figure 1, Item 4).

f. Insert the lapping jig (Figure 2, Item 1) into seal (Figure 1, Item 22).

WARNING



CHEMICAL EYE PROTECTION FIRE

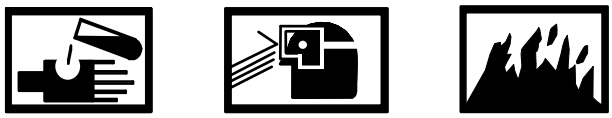
When working with technical isopropyl alcohol, avoid contact with eyes or skin. Wear protective rubber gloves, chemical splash goggles or face shield and protective clothing. Use in a well ventilated area. An eye wash station should be available. Isopropyl alcohol is extremely flammable. Keep away from open flame, heat, sparks and hot surfaces. Overexposure may cause eye and respiratory irritation. Prolonged or repeated overexposure can cause nerve damage, digestive tract irritation, central nervous system problems, unconsciousness and even death.

g. Lubricate seal (Figure 1, Item 22) and lapping jig (Figure 2, Item 2) with alcohol continuously during lapping operation to prevent the seal (Figure 1, Item 22) from turning.

h. With hand drill set at medium speed (approximately 1000 RPM), move lapping jig (Figure 2, Item 1) back and forth in seal (Figure 1, Item 22), maintaining contact with seal (Figure 1, Item 22) for 1 minute.

i. Remove lapping jig (Figure 2, Item 2) from seal (Figure 1, Item 22).

WARNING



CHEMICAL EYE PROTECTION FIRE

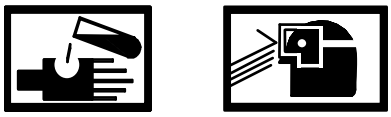
When working with technical isopropyl alcohol, avoid contact with eyes or skin. Wear protective rubber gloves, chemical splash goggles or face shield and protective clothing. Use in a well ventilated area. An eye wash station should be available. Isopropyl alcohol is extremely flammable. Keep away from open flame, heat, sparks and hot surfaces. Overexposure may cause eye and respiratory irritation. Prolonged or repeated overexposure can cause nerve damage, digestive tract irritation, central nervous system problems, unconsciousness and even death.

j. Using a cleaning cloth and alcohol, clean the lapping jig (Figure 2, Item 2) and seal (Figure 1, Item 22).

ASSEMBLE PRESSURE REGULATOR VALVE - CONTINUED

8. Assemble piston assembly (Figure 1, Item 6).
   a. Align inner piston (Figure 1, Item 9) screw hole with outer piston (Figure 1, Item 2) screw hole.

WARNING



CHEMICAL **EYE PROTECTION**

When working with sealing compound, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use with adequate ventilation.

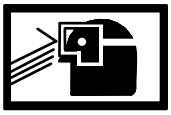
   b. Apply two drops sealing compound to threads of new screw (Figure 1, Item 7).
   c. Install new packing (Figure 1, Item 8) and new screw (Figure 1, Item 7) in piston assembly (Figure 1, Item 6) to secure outer piston (Figure 1, Item 2) to inner piston (Figure 1, Item 9).
   d. Using torque wrench and screwdriver bit, torque new screw (Figure 1, Item 7) to 18–20 in. lb (2.0–2.25 N-m).
9. Install new spring (Figure 1, Item 15), ball (Figure 1, Item 14) and new quad ring (Figure 1, Item 13) into pressure regulator valve housing (Figure 1, Item 1).
10. Align bleed hole of seal retainer (Figure 1, Item 12) with ball (Figure 1, Item 14) and install seal retainer (Figure 1, Item 12) onto pressure regulator housing (Figure 1, Item 1).
11. Install four washers (Figure 1, Item 11) and four screws (Figure 1, Item 10) to secure seal retainer (Figure 1, Item 12) to the pressure regulator valve housing (Figure 1, Item 4).
12. Install spring (Figure 1, Item 5).
13. Install piston assembly (Figure 1, Item 6) into the pressure regulator valve housing (Figure 1, Item 4).
14. Depress piston assembly (Figure 1, Item 6) to compress spring (Figure 1, Item 5) below retaining ring (Figure 1, Item 3) groove in the pressure regulator valve housing (Figure 1, Item 4).
15. Install retaining ring (Figure 1, Item 3) and slowly release pressure on piston assembly (Figure 1, Item 6).
16. Clean up spilled fluid with fuel spill control kit and dispose of fuel spill control kit waste per local procedures.
17. Install pressure regulator valve on nozzle (WP 0146, WP 0148 and WP 0151) for complete installation procedures).

END OF TASK

TEST PRESSURE REGULATOR VALVE

WARNING

CHEMICAL



EYE PROTECTION

When working with sealing compound, avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wear protective rubber gloves and chemical splash goggles. Avoid prolonged or repeated breathing of vapors. Use with adequate ventilation.

N

Jet A, JP-4 or commercial solvent 140 may be used as test fluid. To test valve, a means of providing 300 PSI (2,068 KPa) fluid pressure to both sides of the valve for a period of 2 minutes must be used.

1. Place pressure regulator valve (Figure 1, Item 1) in test unit.
2. Pressure test pressure regulator valve (Figure 1, Item 1) for leaks and other damage for 2 minutes.
   a. Using test fluid, purge pressure regulator valve (Figure 1, Item 1) of air.
   b. Apply 300 PSI (2,068 KPa) to both sides of pressure regulator valve (Figure 1, Item 1) at the same time for 1 minute.
   c. During the 2nd minute, check pressure regulator valve (Figure 1, Item 1) for leakage and any other damage or distortion.
   d. Reduce pressure to zero.
   e. Reject any pressure regulator valve (Figure 1, Item 1) showing leakage, damage or distortion.
   f. Remove pressure regulator valve (Figure 1, Item 1) from 300 PSI (2,068 KPa) fluid pressure source.
   g. Remove pressure regulator valve (Figure 1, Item 1) from test unit.

N

A source of flow at a rate of 500 cc/min. and 0–100 PSI (0–689 KPa) gages installed upstream and downstream of valve must be used to test output pressure.

3. Test pressure regulator valve (Figure 1, Item 1) output pressure.
   a. Install valve on test unit with a flowmeter and 0–100 PSI (0–689 KPa) gages on both upstream and downstream sides of valve.
   b. Using test fluid, purge valve of air.
   c. Apply 65 PSI, ± 3 (448 ± 20.7 KPa) PSIG to valve inlet.
   d. Begin flow of 500 ± 50 cc/min.

TEST PRESSURE REGULATOR VALVE - CONTINUED

N

If valve has an output rating of 15 PSIG (103.4 KPa), valve cannot exceed 20 PSIG (137.8 KPa) at output.

e. Read downstream pressure gage. Reject valves exceeding 5 PSIG (34.4 KPa) above valve rating.

f. Shut down test unit. When upstream and downstream pressure gages return to zero, test is completed.

4. Remove pressure regulator valve from test unit.

END OF TASK

END OF WORK PACKAGE

CHAPTER 9

GENERAL MAINTENANCE INSTRUCTIONS FOR 800K FUEL SYSTEM SUPPLY POINT (FSSP)

FIELD MAINTENANCE
MISCELLANEOUS COMPONENTS
CLEAN AND INSPECT

INITIAL SETUP:

Tools

Tool kit, general mechanic's (WP 0162, Item 1)
Apron, utility (WP 0165, Item 2)
Gloves, rubber, industrial (WP 0165, Item 18)
Goggles, industrial (WP 0165, Item 17)

Materials/Parts

Cleaning compound, solvent (WP 0165, Item 4)
Cloth, cleaning (WP 0165, Item 5)

Personnel Required

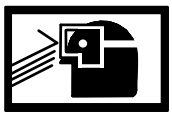
Quartermaster and Chemical Repairman 63J

Equipment Condition

Assembly removed from FSSP installation (WP 0109).

MISCELLANEOUS COMPONENTS CLEAN AND INSPECT

WARNING



EYE PROTECTION

If foreign objects enter your eye, you may be injured. Always wear protective goggles when scraping items with a putty knife.

N

In addition to the other components listed in previous work packages of this technical manual, there are a number of various miscellaneous fittings and components which are furnished with the FSSP. The following general maintenance procedures are to be used to verify that these additional miscellaneous components are in proper working order.

1. Remove all buildup of dirt, oil and debris from all mating surfaces and clamping areas using a putty knife.

FIELD MAINTENANCE (FSSP) MISCELLANEOUS COMPONENTS CLEAN AND INSPECT– CONTINUED

WARNING

CHEMICAL

EYE PROTECTION

Cleaning solvents can cause eye and skin irritation. Wear protective rubber gloves and chemical splash goggles or face shield to avoid skin or eye contact. Use in a well ventilated area. First aid for skin contact: remove any contaminated clothing and wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If irritation persists, call a physician. If overcome by vapors, move from exposed area and call a physician. In case of ingestion, Do not induce vomiting, call a physician immediately.

2. Clean all metallic parts with a cleaning cloth or a part cleaning brush and solvent cleaning compound.
3. Allow parts to thoroughly dry.

INSPECT

1. Inspect all metallic parts for cracks, corrosion or broken fittings. If cracks, corrosion or broken fittings are found, replace with a serviceable like item.
2. Check that assemblies function as required. If assemblies do not function as required, replace with a serviceable like item.
3. Inspect ground wire assemblies for frayed ground wire and for bent or inoperative grounding clamps. If ground wires are frayed or grounding clamps are bent or inoperative, replace with a serviceable ground wire assembly.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL SYSTEM SUPPLY POINT (FSSP)
TORQUE LIMITS

TORQUE LIMITS AND TORQUE TABLES

When To Use Torque Limits

When a torque is not specified in an individual work package, use the procedures in this work package to determine proper torque limits and use of adapters with torque wrenches.

When To Use Adapters With Torque Wrenches

When an adapter is necessary due to space or type of fitting being torqued, it must be determined how the adapter changes the amount of force applied. If the adapter increases or decreases the distance from the drive of the torque wrench to the fitting being torqued, an equation must be used to compensate for the difference.

HOW TO USE ADAPTERS WITH TORQUE WRENCHES

N

The following abbreviations apply to the below procedures:

DT = Desired Torque
LT = Length of Torque Wrench
AL = Adapter Length
AT = Applied Torque

1. If the adapter used decreases the distance between the center of the torque wrench handle and the center of the drive, first find the desired torque for the fitting, then calculate as follows:

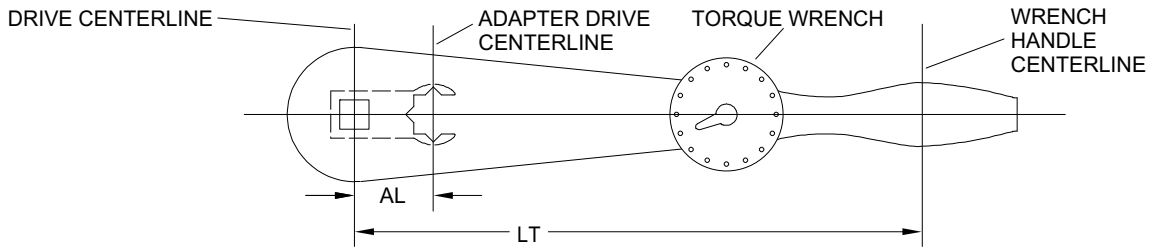


Figure 1. Torque Wrench.

   a. Multiply DT by LT.
   b. Subtract AL from LT.
   c. Divide the first answer by the second answer to find AT.

2. If the adapter used increases the distance between the center of the torque wrench handle and the center of the drive, first find the desired torque for the fitting, then calculate as follows:

HOW TO USE ADAPTERS WITH TORQUE WRENCHES – CONTINUED

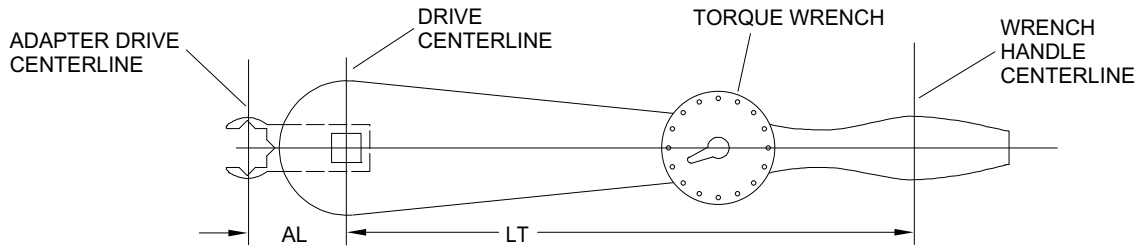


Figure 2. Torque Wrench.

a. Multiply DT by LT.

b. Add AL and LT.

c. Divide the first answer by the second answer to find AT.

HOW TO USE TORQUE TABLES

1. Measure the diameter of the bolt to be torqued.

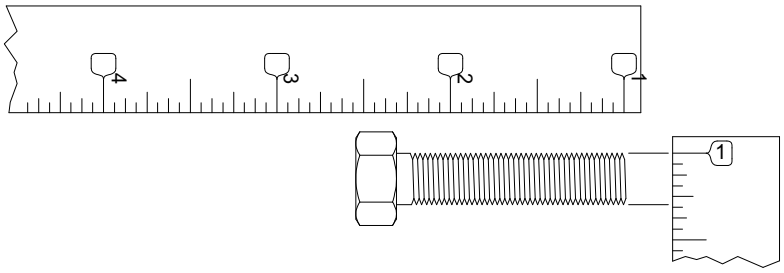


Figure 3. Torque Wrench Measurement

2. For Society of Automotive Engineers (SAE) fasteners, determine the threads per inch by counting the threads. For metric fasteners, determine the thread pitch using a thread pitch gage.

3. Determine the type of markings on the bolt you are torquing by comparing the markings on the head of the bolt with the chart below.

HOW TO USE TORQUE TABLES – CONTINUED

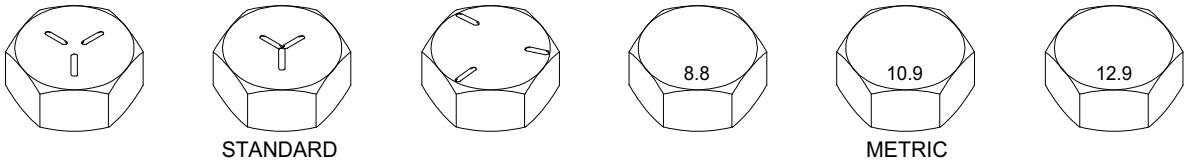


Figure 4. Torque Wrench Standard and Metric.

4. Determine if this will be a wet or dry torque.
   a. Wet torque is any bolt that is lubricated or coated with an antiseize compound.
   b. Dry torque is any bolt that is not lubricated or coated with an antiseize compound.
5. On the table below, locate the bolt to be torqued.
   a. Locate the diameter of the bolt.
   b. Determine the threads per inch for the SAE fastener or the thread pitch for the metric fastener.
   c. Slide across the table to the proper grade.
   d. Choose wet or dry.
   e. Slide down the proper column and across the proper row until they intersect, this is the proper torque value.

Table 1. SAE Standard Torque Table

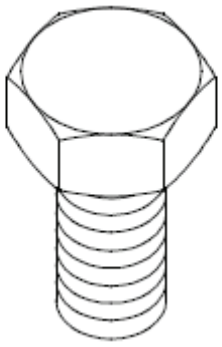
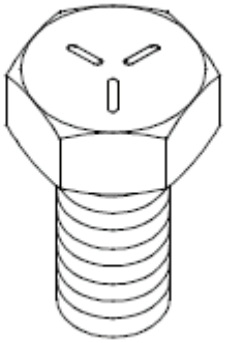
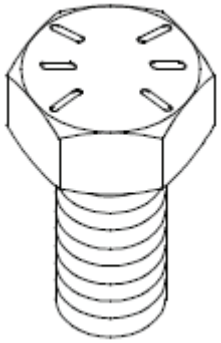
		SAE GRADE NO. 2				SAE GRADE NO. 5				SAE GRADE NO. 8			
													
		DRY		WET		DRY		WET		DRY		WET	
DIA IN.	THREADS PER IN.	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M
1/4	20	66	7.46	49	5.54	101	11.41	76	8.58	143	16.15	107	12.09
1/4	28	75	8.47	56	6.33	116	13.10	87	9.83	164	18.53	123	13.89
5/16	18	135	15.25	101	11.41	209	23.61	157	17.73	295	33.32	221	24.96
5/16	24	150	17.17	112	12.65	230	25.98	173	19.54	327	36.94	245	27.68
3/8	16	240	27.11	180	20.33	370	41.80	278	31.40	523	59.08	392	44.28
3/8	24	272	30.73	204	23.04	420	47.44	315	35.58	593	66.99	445	50.27
7/16	14	384	43.38	288	32.53	593	66.99	445	50.27	837	94.55	628	70.94
7/16	20	428	48.35	321	36.26	662	74.78	496	56.03	935	105.62	700	79.07
1/2	13	585	66.08 4	39	49.59	904	102.12	678	76.59	1277	144.25	958	108.22
1/2	20	660	74.55	495	55.92	1020	115.22	764	86.30	1440	162.66	1080	122.00

Table 2. SAE Standard Torque Table.

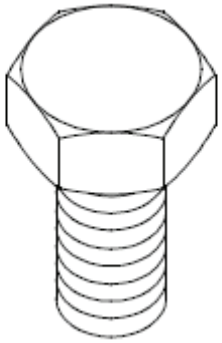
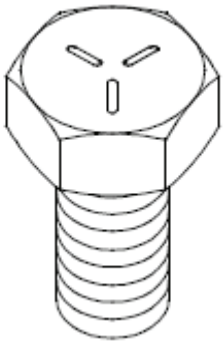
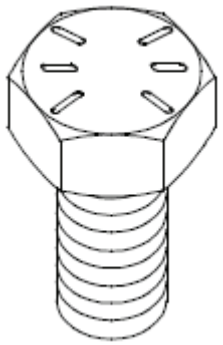
		SAE GRADE NO. 2				SAE GRADE NO. 5				SAE GRADE NO. 8			
													
		DRY		WET		DRY		WET		DRY		WET	
DIA IN.	THREADS PER IN.	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M
9/16	12	70	94.92	53	71.87	109	147.80	82	111.19	154	208.82	115	155.94
9/16	18	78	105.77	59	80.00	121	164.08	91	123.40	171	231.88	128	173.57
5/8	11	97	131.53	73	98.99	150	203.40	113	153.23	212	287.47	159	215.60
5/8	18	110	149.16	82	111.19	170	230.52	127	172.21	240	325.44	180	244.08
3/4	10	172	233.23	129	174.92	269	364.76	201	272.56	376	509.86	282	382.39
3/4	16	192	260.35	144	195.26	297	402.73	223	302.29	420	569.52	315	427.14
1	8	-	-	-	-	644	873.26	483	654.95	909	1232.60	683	926.15
1	12	-	-	-	-	704	954.62	528	715.97	995	1349.22	746	1011.58

Table 3. Metric Standard Torque Table.

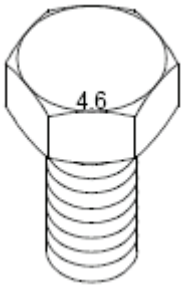
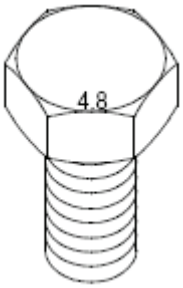
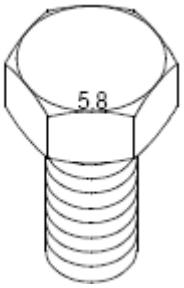
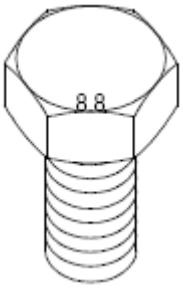
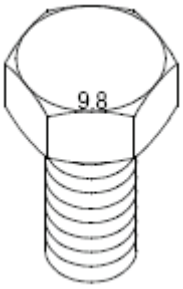
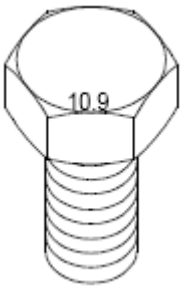
		CLASS 4.6				CLASS 4.8				CLASS 5.8			
													
		DRY		WET		DRY		WET		DRY		WET	
DIA IN.	THREAD PITCH	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB	N-M	IN. LB
3.0	0.5	.50	4	.40	4	.70	6	.50	4	-	-	-	-
3.5	0.6	.80	7	.60	5	1.10	10	.80	7	-	-	-	-
4.0	0.7	1.20	11	.90	8	1.60	14	1.20	11	-	-	-	-
5.0	0.8	2.40	21	1.80	16	3.30	29	2.50	22	4.00	35	3.00	27
6.0	1.0	4.00	35	3.00	27	5.66	50	4.20	37	6.90	61	5.20	46
8.0	1.25	9.90	88	7.40	66	13.60	120	10.20	90	16.70	148	12.50	111
10.	1..50	19.60	174	14.70	130	27.00	239	20.00	177	33.10	293	24.80	220
12.0	1.75	34.10	302	25.60	227	47.00	416	35.00	310	58.00	513	43.00	381
14.0	2.0	54.30	481	40.80	361	75.00	664	56.00	496	92.00	814	69.00	611

Table 4. Metric Standard Torque Table.

		CLASS 8.8				CLASS 9.8				CLASS 10.9			
													
		DRY		WET		DRY		WET		DRY		WET	
DIA IN.	THREAD PITCH	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB	N-M	FT LB
8.0	1.25	26.40	19	19.80	15	28.50	21	21.40	16	36.50	27	27.30	20
10.0	1.50	52.20	38	39.20	29	56.60	42	42.40	31	72.20	53	54.20	40
12.0	1.75	91.00	67	68.00	50	99.00	73	74.00	55	126.00	93	94.00	69
14.0	2.00	145.00	107	109.00	80	157.00	116	118.00	87	200.00	147	150.00	111
16.0	2.00	226.00	167	170.00	125	245.00	181	184.00	136	313.00	231	235.00	173
20.0	2.50	441.00	325	331.00	244	478.00	353	358.00	264	610.00	450	458.00	338
24.0	3.00	762.00	562	572.00	422	826.00	609	620.00	457	1055.00	778	791.00	583
30.0	3.50	1515.00	1117	1136.00	838	1641.00	1210	1231.00	908	2095.00	1545	1572.00	1159
36.0	4.00	2647.00	1952	1985.00	1464	2868.00	2115	2151.00	1586	3662.00	2701	2746.00	2025

END OF WORK PACKAGE

CHAPTER 10
SUPPORTING INFORMATION
FOR
800K FUEL SYSTEM SUPPLY POINT (FSSP)

FIELD AND SUSTAINMENT SUPPORT MAINTENANCE
FUEL SYSTEM SUPPLY POINT (FSSP)
REFERENCES

SCOPE

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

ARMY REGULATIONS

AR 200-1	Environmental Protection and Enhancement
AR 700-138	Army Logistics Readiness and Sustainability

DA PAMPHLETS

DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual

FIELD MANUALS

FM 3-5	NBC, Decontamination
FM 3-11.4	Multiservice Tactics, Techniques and Procedures for Nuclear, Biological and Chemical (NBC) Protection
FM 4-25.11	First Aid
FM 10-67-1	Concepts and Equipment of Petroleum Operations

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 5988-E	Equipment Maintenance and Inspection Worksheet
SF 361	Transportation Discrepancy Report
SF 368	Product Quality Deficiency Report

MISCELLANEOUS

ASME Y14.38-1999	The American Society of Mechanical Engineers Abbreviations and Acronyms
CTA 8-100	Common Table of Allowances, Army Medical Department Expendable/Durable Items
CTA 50-970	Common Table of Allowances, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items)

SUPPLY CATALOGS

SC 4910-95-A81	Standard Automotive Tool Set (SATS)
SC 5180-95-N26	Tool Kit, General Mechanic’s Automotive

TECHNICAL BULLETINS

TB 10-4930-232-25	Preservation, Packing, Packaging and Marking for Fuel System Supply Point (FSSP)

TECHNICAL MANUALS

TM 10-5430-239-12&P	Operator's and Unit Maintenance Manual (including Repair and Special Tools List) Tank, Collapsible, Fabric: Petroleum, 5, 000 Barrel Model BA91-142 (EIC-ZFU) (NSN 5430-01-374-5656) Model RCF0210000 (EIC-ZF9) (NSN 5430-01-433-6246) Model PD5430-001 (EIC-ZFQ) (NSN 5430-01-160-3528) Model GTA-210KF (EIC-GTA) (NSN 5430-01-505-4249)
TM 10-4330-235-13&P	Operator, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Filter-Separator, Liquid Fuel, Frame Mounted 350 GPM Capacity
TM 10-4930-248-13&P	Operators, Unit, and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Closed-Circuit Refueling Nozzle Assembly Model 64017B (NSN: 4930-01-383-9467)
TM 10-4930-363-14	Operator's Field and Sustainment Maintenance Manual for 800K Gallon Fuel System Supply Point (FSSP) (NSN: 4930-01-545-6669).
TM 10-4930-363-24P	Repair Parts and Special Tools List, Field Maintenance for 800K Fuel System Supply Point (FSSP) (NSN: 4930-01-545-6669). 800,000 Gallon System Model.
TM 10-4930-364-13&P	Operators, Field and Sustainment Maintenance and Repair Parts and Special Tools List for Additive Fuel Injector Assembly, (NSN: 4930-01-418-2694).
TM 10-6630-240-12&P	Operators Unit Maintenance Manual, Including Repair Parts and Special Tools List, for Test Kit Petroleum, Aviation Fuel Contaminant, Model PTK-100 (NSN: 6630-01-347-9670)
TM 55-8145-203-13&P	Operators, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List (RPSTL) for Tricon Container, Model ESETC-1.
TM 750-244-6	Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.
TM 10-3835-242-14	Operator's Unit, Direct Support and General Support Maintenance Manual for Fuel Unit Assembly (FUA) NSN 4930-01-534-6423 Pipeline Connection Assembly (PLCA) NSN 3835-01-534-7393.
TM 10-4320-374-14	Operator's Unit, Direct Support And General Support Maintenance Manual For Fuel Pumping Assembly, Diesel Engine Driven, Wheel Mounted, 600 Gallons Per Minute (GPM) At 150 PSI NSN 4320-01-193-3429
TM 10-4930-363-23P	Operator and Field Maintenance Manual Including Repair Parts and Special Tools List for Fuel Additive Injection Assembly

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL SYSTEM SUPPLY POINT (FSSP)
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 Army 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 (C), Service (O) and Field (F) maintenance.

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 Standard Automotive Tool Set (SATS) 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.
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.

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED

8. 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.
9. 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.

N

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.

10. 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.
11. 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 materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists FGC numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the 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.)

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED

Explanation of Columns in the MAC - Continued

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate sub column. 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 Operator or crew maintenance
O Service maintenance
F Field maintenance

Sustainment:

H Below depot maintenance
D Depot maintenance

N

The “L” maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by a 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 alphabetical 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, model number, or type number.

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED

Explanation of the Columns in the 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.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
MAINTENANCE ALLOCATION CHART (MAC), TOOLS AND TEST EQUIPMENT
MAINTENANCE ALLOCATION CHART

MAINTENANCE ALLOCATION CHART

Table 1. Maintenance Allocation Chart (MAC).

(1)	(2)	(3)	(4) MAINTENANCE LEVEL					(5)	(6)
			FIELD			SUSTAINMENT			
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	CREW C	SERVICE O	FIELD F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
00	**FUEL SYSTEM SUPPLY POINT (FSSP)**								
01	**HOSES, CAMLOCKS, AND COUPLINGS**								
0101	HOSE ASSEMBLY, 2 IN. X 50 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
010101	QUICK DISCONNECT COUPLING HALF (VALVED DRY-BREAK)	Inspect Replace Repair	0.2	 0.5 1.0	 2.0			 1, 2, 4	
0102	HOSE ASSEMBLY 3 IN. X 50 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 3, 10	A
010201	QUICK DISCONNECT COUPLING HALF (VALVED DRY-BREAK)	Inspect Replace Repair	0.2	 0.3 0.5	 2.0			 1, 2, 4, 6 1, 2, 4, 6	A

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	UNIT C	SERVICE O	FIELD F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
0103	HOSE ASSEMBLY, 4 IN. X 25 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0104	HOSE ASSEMBLY, 4 IN. X 10 FT. (SUCTION)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0105	HOSE ASSEMBLY, 6 IN. X 25 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0106	HOSE ASSEMBLY, 6 IN. X 50 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0107	HOSE ASSEMBLY, 6 IN. X 10 FT. (DISCHARGE)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0108	HOSE ASSEMBLY, 6 IN. X 10 FT. (SUCTION)	Inspect Replace Repair	0.2 0.3	 1.0				 1, 2, 10	A
0109	ADAPTER 4 IN. FEMALE CAMLOCK X 3 IN. VALVED DRY-BREAK	Inspect Replace Repair	0.2 0.3	 1.0	 2.0			 1, 2, 4, 6	A

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0110	ADAPTER 4 IN.	Inspect	0.2						A
	MALE CAMLOCK	Replace	0.3						
	X 3 IN. VALVED	Repair		1.0	2.0			1, 2, 4, 6	
	DRY-BREAK								
0111	COUPLING HALF,	Inspect	0.1						A
	DUST CAP 1.5 IN.	Replace	0.1						
		Repair	0.2						
0112	COUPLING HALF,	Inspect	0.1						A
	DUST CAP 3 IN.	Replace	0.1						
		Repair	0.2						
0113	COUPLING HALF,	Inspect	0.1						A
	DUST CAP 4 IN.	Replace	0.1						
		Repair	0.2						
0114	COUPLING HALF,	Inspect	0.1						A
	DUST PLUG 3 IN.	Replace	0.1						
		Repair	0.2						
0115	COUPLING HALF,	Inspect	0.1						A
	DUST CAP 4 IN.	Replace	0.1						
		Repair	0.2						
0116	2 IN. QUICK	Inspect	0.1						A
	DISCONNECT	Replace	0.1						
	COUPLING HALF	Repair	0.2						
02	**VALVES**								
0201	2 IN. MALE QUICK	Inspect	0.1						A
	DISCONNECT X 2	Replace		0.3					
	IN. VALVED DRY-	Repair		0.5	0.2				
	BREAK								
0202	BALL VALVE	Inspect	0.2						A
	ASSEMBLY, 2 IN.	Replace	0.3						
		Repair		1.0				1, 2, 3	
0203	VALVE	Inspect	0.2						A
	ASSEMBLY,	Replace	0.3						
	BUTTERFLY	Repair		1.0				1, 2, 11, 12	
	4 IN. X 4 IN.								

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0204	GATE VALVE ASSEMBLY, 4 IN. FEMALE X 4 IN. MALE	Inspect Replace Repair	0.2 0.3	1.1				1, 2, 11, 12	A
0205	GATE VALVE ASSEMBLY, 6 IN. FEMALE	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 11, 12	A
03	**TEES ASSEMBLIES**								
0301	2 IN. TEE ASSEMBLY (VALVED DRY-BREAK)	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 11, 12	A
0302	TEE ASSEMBLY 4 IN. FEMALE X 4 IN. MALE X 4 IN. FEMALE	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 11, 12	A
0303	TEE ASSEMBLY 6 IN. FEMALE X 6 IN. MALE X 6 IN. MALE	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 12, 12	A
0304	TEE ASSEMBLY 6 IN. MALE X 6 IN. FEMALE X 6 IN. MALE	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 12, 12	A
0305	TEE ASSEMBLY 6 IN. FEMALE X 6 IN. FEMALE X 4 IN. MALE	Inspect Replace Repair	0.2 0.3	1.0				1, 2, 12, 12	A

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0306	TEE ASSEMBLY	Inspect	0.2						A
	6 IN. FEMALE	Replace	0.3						
	X 6 IN. FEMALE X	Repair		1.0				1, 2, 12, 12	
	6 IN. MALE								
0307	TEE ASSEMBLY	Inspect	0.2						A
	6 IN. FEMALE	Replace	0.3						
	X 6 IN. MALE X	Repair		1.0				1, 2, 12, 12	
	6 IN. FEMALE								
0308	TEE ASSEMBLY	Inspect	0.2						A
	6 IN. MALE	Replace	0.3						
	X 6 IN. FEMALE X	Repair		1.0				1, 2, 12, 12	
	4 IN. FEMALE								
0309	TEE ASSEMBLY	Inspect	0.2						A
	6F X 6M X 4M	Replace	0.3						
		Repair		1.0				1, 2, 12, 12	
04	**ADAPTERS AND REDUCERS**								
0401	ADAPTER, 3 IN.	Inspect	0.2						A
	FEMALE X 3 IN.	Replace	0.3						
	FEMALE	Repair	0.3					1, 2, 4	
0402	ADAPTER, 4 IN.	Inspect	0.2						A
	FEMALE X 6 IN.	Replace	0.3						
	MALE	Repair	0.3					1, 2, 4	
0403	2 IN. VALVED	Inspect	0.2						A
	DRY-BREAK	Replace	0.3						
	ADAPTER	Repair		1.0	2.0			1, 2, 4, 6	
	ASSEMBLY								

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0404	3 IN DOUBLE MALE ADAPTER ASSEMBLY	Inspect Replace Repair	0.2 0.3 0.3					 1, 2, 4	A
0405	4 IN DOUBLE FEMALE ADAPTER ASSEMBLY	Inspect Replace Repair	0.2 0.3 0.3					 1, 2, 4	A
0406	4 IN DOUBLE MALE ADAPTER ASSEMBLY	Inspect Replace Repair	0.2 0.3 0.3					 1, 2, 4	A
0407	2 IN. FEMALE X 1.5 IN. MALE REDUCER ASSEMBLY	Inspect Replace Repair	0.2 0.2 0.2						A
0408	4 IN. FEMALE X 2 IN. MALE REDUCER ASSEMBLY	Inspect Replace Repair	0.2 0.2 0.2						A
0409	4 IN. FEMALE X 3 IN. MALE REDUCER ASSEMBLY	Inspect Replace Repair	0.2 0.2 0.2						A
0410	4 IN. MALE X 3 IN. FEMALE REDUCER ASSEMBLY	Inspect Replace Repair	0.2 0.2 0.2						A
0411	6 IN. FEMALE X 4 IN. MALE REDUCER ASSEMBLY	Inspect Replace Repair	0.2 0.2 0.2						A

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
05	**NOZZLES**								
0501	NOZZLE ASSEMBLY, FUEL AND OIL SERVICING, 1 IN.	Inspect	0.2						A
		Replace	0.3						
		Repair		1.0				1, 2, 3	
050101	PRESSURE REGULATOR	Inspect	0.2						A
		Replace		0.3				1, 2, 3	
		Repair				4.0		1, 2, 3, 4, 7, 8	
050102	2 IN. QUICK DISCONNECT COUPLING HALF (NON-VALVED DRY-BREAK)	Inspect	0.2						A
		Replace		0.3					
		Repair		0.5	2.0			1, 2, 4	
0502	NOZZLE ASSEMBLY, D1, 64201CGH2KQ	Inspect	0.2						A, G, H
		Replace	0.2						
		Repair		1.0				1, 2, 4	
050201	BODY ASSEMBLY	Inspect	0.2						A
		Replace		0.5					
		Repair		0.3				1, 2, 4	G, H
0503	NOZZLE ASSEMBLY, D1, 64201CGH2MQ	Inspect	0.2						A, G, H
		Replace	0.2						
		Repair		1.0		5.0		1, 2, 4	
050301	BODY ASSEMBLY	Inspect	0.2						A
		Replace		0.5					
		Repair		0.3				1, 2, 4	G, H
0504	NOZZLE ASSEMBLY, D1, WITH 2 IN. UNISEX COUPLING	Inspect	0.2						A, G, H
		Replace	0.2						
		Repair		1.0				1, 2, 4	

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	UNIT C	SERVICE O	FIELD F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
0505	NOZZLE, CLOSED CIRCUIT REFUELING	Inspect	0.2						A, D, G, H
		Replace	0.2	1.0				1, 2, 4	
		Repair							
050501	BODY ASSEMBLY	Inspect	0.2						
		Replace		0.5					H
		Repair		0.3				1, 2, 4	
0506	STAND ASSEMBLY, NOZZLE AND VALVE	Inspect	0.2						A
		Replace	0.3						
		Repair		1.0				1, 2	
06	**MISCELLANEOUS**								
0601	FLOWMETER ASSEMBLY, INLINE 6 IN.	Inspect	0.2						A
		Replace	0.2						
		Repair		1.0	4.0			1, 2, 5, 6, 12, 13	
0602	COUPLING, RAIL TANKER, NATO	Inspect	0.2						A
		Replace		0.3				1, 2, 4, 6	
		Repair		0.5	2.0			1, 2, 4, 6	
0603	COUPLING SET, TANK TRUCK, NATO	Inspect	0.2						A
		Replace		0.3				1, 2, 4, 6	
		Repair		0.5	2.0			1, 2, 4, 6	
0604	DISPLACEMENT AND EVACUATION KIT, 4 IN. HOSE LINE	Inspect	0.2						A
		Replace	0.2						
		Repair	0.1						
0605	DISPLACEMENT AND EVACUATION KIT, 6 IN. HOSE LINE	Inspect	0.2						A
		Replace	0.2						
		Repair	0.1						

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0606	FILTER-SEPARATOR, LIQUID	Inspect	0.6	0.7					B
		Replace		6.0					
		Repair		1.3	3.0				
0607	FUEL ADDITIVE INJECTION ASSEMBLY	Inspect	0.2					1, 2, 6, 9	A, I
		Replace	0.2						
		Repair		1.0	3.0	4.0			
0608	FUEL SPILL CONTROL KIT	Inspect	0.2						A
		Replace	0.2						
		Repair	0.1						
0609	GROUND ROD ASSEMBLY	Inspect	0.2						A
		Replace	0.3						
		Repair		1.0				1, 2, 3	
0610	GROUND WIRE ASSEMBLY	Inspect	0.2						A
		Replace	0.3						
		Repair		1.0				1, 2, 3	
0611	HOSE REPAIR KIT	Inspect	0.2						A, E
		Replace	0.2						
		Repair	0.1						
0612	PUMPING ASSEMBLY, 600 GPM	Inspect	0.2						A, C
		Replace	0.2						
		Repair	0.1						
0613	WET WING DEFUELING ASSEMBLY	Inspect	0.2						A

Table 1. Maintenance Allocation Chart (MAC) – Continued.

(1)	(2)	(3)	(4)					(5)	(6)
			MAINTENANCE LEVEL						
			FIELD			SUSTAINMENT			
			UNIT	SERVICE	FIELD	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
GROUP NUMBER	COMPONENT/ ASSEMBLY	MAINTENANCE FUNCTION	C	O	F	H	D		
0614	REGULATOR, PRESSURE, 2F INLET, 2 UNISEX OUTLET 64249	Inspect Replace Repair	0.2 0.3	1.0					

MAINTENANCE ALLOCATION CHART, TOOLS AND TEST EQUIPMENT

Table 2. Tools and Test Equipment for Fuel System Supply Point (FSSP).

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	O	Tool kit, general mechanic's	5180-00-177-7033	SC 5180-95-N26
2	O	Standard Automotive Tool Set (SATS)	4910-01-490-6453	SC 4910-95-A81
3	O	Wrench, torque, 0–30 in. lb	5120-00-117-4832	B107.14M
4	O	Wrench, torque, 0–175 ft lb	5120-01-396-5751	1753LDF
5	O	Wrench, torque, 0–150 in. lb	5120-01-374-1931	GGG-W-2843
6	H	Rod, threaded, 10-24 thread size, 2 ft length		90034A011
7	H	Nut, hex (10-24 thread)	5310-01-251-7570	9048A011
8	O	Lubricating gun, hand	4930-00-965-0288	30415
9	O	Multimeter	6625-01-265-6000	27 W/ACCE
10	O	Wrench, torque, 3/8 sqdr 5–75 ft lb	5120-01-355-1734	QD2FR75
11	O	Adapter, socket wrench, 3/8 in. female square end, 1/2 in. male square end	5120-00-240-8703	B107.10M
12	H	Wrench, pipe 48 in.	5120-01-399-8982	848HD
13		Wrench, Allen, 5/32		

MAINTENANCE ALLOCATION CHART, REMARKS

Table 3. Remarks for Fuel System Supply Point (FSSP).

REMARKS CODE	REMARKS
A	Crew/operator inspection limited to preventive maintenance checks and services (PMCS).
B	Refer to TM 10-4330-235-13&P.
C	Refer to TM 10-4320-372-14.
D	Refer to TM 10-4930-248-13&P.
E	Refer to TM 10-5430-242-12&P.
F	Refer to TM 55-8145-203-13&P.
G	Repair to consist of replacement of exterior components only at unit level maintenance.
H	Complete repair at Specialized Repair Activity (SRA).
I	Refer to TM 10-4930-364-13&P (Additive Fuel Injector Assembly)

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
FUEL SYSTEM SUPPLY POINT (FSSP)
COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

INTRODUCTION

SCOPE

This work package lists COEI and BII for the 800K Fuel System Supply Point (FSSP) System 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 FSSP. 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 FSSP in operation, operate it, and to do emergency repairs. Although shipped in separately, BII must be with the FSSP 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 AND BII LIST

Column (1) Illustration Number (Illus. Number). Gives the number of the item illustrated.

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

Column (3) Description, (CAGEC) and Part Number. Identifies the Federal item name (in all capital letters) followed by a minimum description, when needed, to identify the item. The last line below the description is the Commercial and Government Entity Code (CAGEC) (in parentheses) followed by the part number.

Column (4) Usable on Code. When applicable, gives a code if the item you need is not the same for different models of equipment.

Column (5) (U/I). 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 of the item required.

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

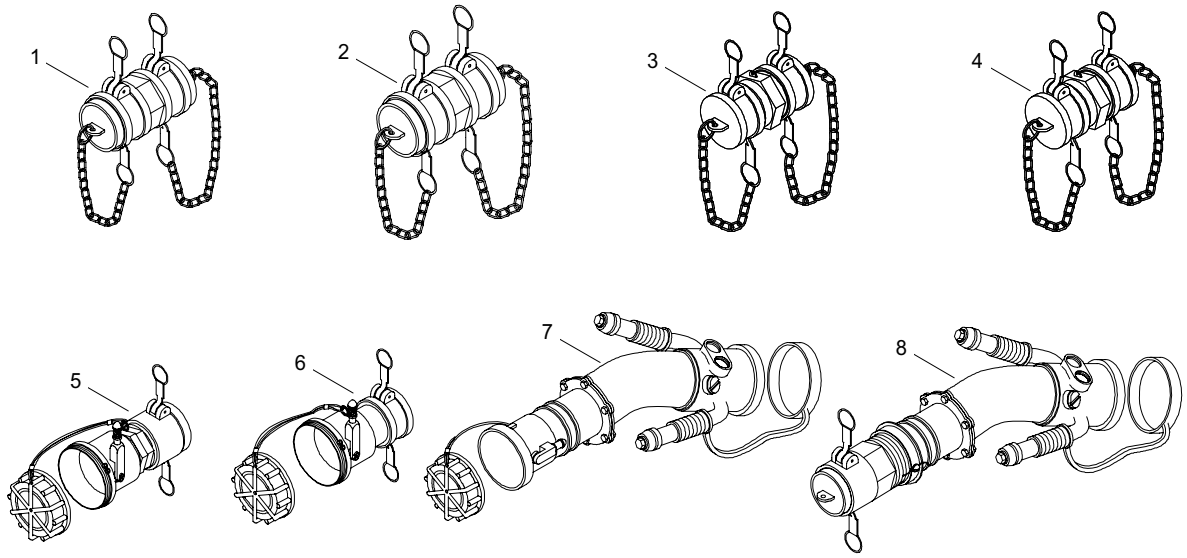


Table 1. Component of End Item (COEI).

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
1	4730-01-543-3986	ADAPTER, DOUBLE FEMALE X FEMALE, 3 IN. NOMINAL SIZE W/GASKET AND LOCKING CAM ARMS (33813) 60273030SG		EA	6
2		ADAPTER, DOUBLE female X female, 4 in. nominal size w/gasket and locking cam arms (33813) 602740401		EA	6
3		ADAPTER, DOUBLE male X male, 3 in. nominal size (33813) 602830301		EA	3
4		ADAPTER, DOUBLE male X male, 4 in. nominal size (33813) 602840401		EA	3
5		ADAPTER female 2 in. quick disconnect X 2 in. valved dry-break (0DT23) 64020GQ		EA	1

Table 1. Component of End Item (COEI) – Continued.

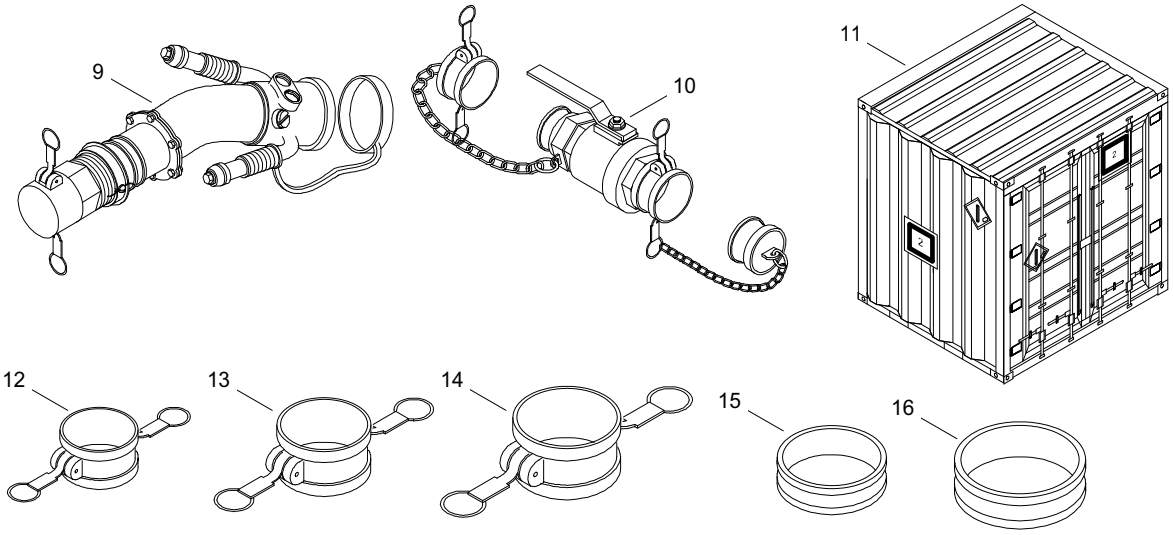
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
6	4730-01-298-0150	ADAPTER male 2 in. quick disconnect X 2 in. valved dry-break (0DT23) 64020FQ		EA	2
7		AIRCRAFT PRESSURE REFUELING NOZZLE D1, w/2 in. non-valved dry-break (0DT23) 64201CF4GHX		EA	2
8	4930-01-543-5623	Aircraft pressure refueling nozzle D1, w/4 in. camlock (0DT23) 64201CGH2MQ		EA	3
					
9	4930-01-548-5462	AIRCRAFT PRESSURE REFUELING NOZZLE D1, w/4 in. male camlock (0DT23) 64201CGH2KQ		EA	3
10	4730-01-543-3975	BALL VALVE ASSEMBLY 2 in., camlock (90598) 78048-100		EA	2
11		CONTAINERS, TRICON (09PD1) BXTBCTATPD0003		EA	6

Table 1. Component of End Item (COEI) – Continued.

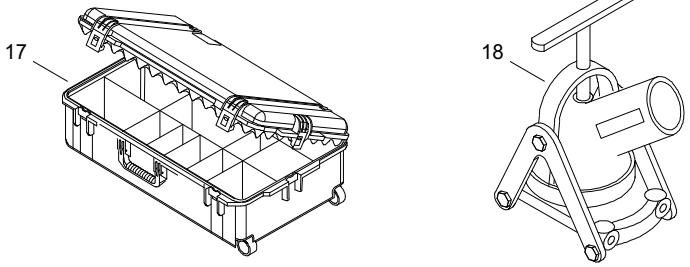
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
12	4730-00-869-5246	COUPLING HALF, CAP, DUST 1.5 in. w/lanyard, gasket and locking cam arms (58536) AA59326/10251001115S1G		EA	1
13	5340-01-544-1356	COUPLING HALF, CAP, DUST 3 in. w/lanyard, gasket and locking cam arms (33813) 1001130S1G		EA	9
14	4730-00-640-6156	COUPLING HALF, CAP, DUST 4 in. w/lanyard, gasket and locking cam arms (58536) AA593261X-9		EA	4
15	5340-01-544-1356	COUPLING HALF, PLUG, DUST 3 in. w/lanyard (33813) 1001230S1G		EA	9
16	4730-00-640-6188	COUPLING HALF, PLUG, DUST 4 in. w/lanyard (58536) AA59326X19		EA	7
					
17	3835-01-415-5873	COUPLING SET, TANK TRUCK, NATO (97403) 13222E8212 Consisting of:		EA	2
		COUPLING HALF, CAMLOCKING female, NATO, 3 in. (D2274) 853.300300.130		EA	1
		COUPLING HALF, CAMLOCKING male, NATO, 3 in. (D2274) 850.300300.130		EA	1

Table 1. Component of End Item (COEI) – Continued.

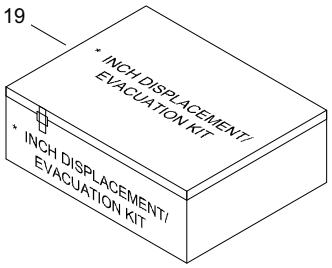
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
		ADAPTER HOSE COUPLING NATO, ISO 228 1 G3A (D2274) 410.300300.130		EA	1
		ADAPTER NATO, ISO 228 1 G3A X 3-8 NPSH (D2274) RN300/3-8NPSH		EA	1
		ADAPTER NATO, ISO 228 1 G3A X 3-8 NPT (D2274) 90007		EA	1
		COUPLING FEMALE, TANK TRUCK NATO, ISO 228 1 63 (D2274) 832.300300.133		EA	1
		COUPLING MALE, TANK TRUCK NATO, ISO 228 1 63 (D2274) 833.300300.130		EA	1
		SHIPPING AND STORAGE CONTAINER (11214) IM2700		EA	2
18	3835-01-414-0464	COUPLING, RAIL TANKER, NATO (97403) 13222E8212		EA	2
					
19		DISPLACEMENT AND EVACUATION KIT		EA	1
		6 in. hose line (90598) 78059-101		EA	1
		Consisting of:			
		CHEST, EVACUATION KIT ASSEMBLY 4 in. hose line (90598) 78128-100		EA	1
		BALL, DISPLACEMENT 4.00 (63853) 08E004.12E		EA	1
		BALL, DISPLACEMENT 6.00 (63853) 08E006.12E		EA	1
		EJECTOR ASSEMBLY (90598) 78126-100		EA	1

Table 1. Component of End Item (COEI) – Continued.

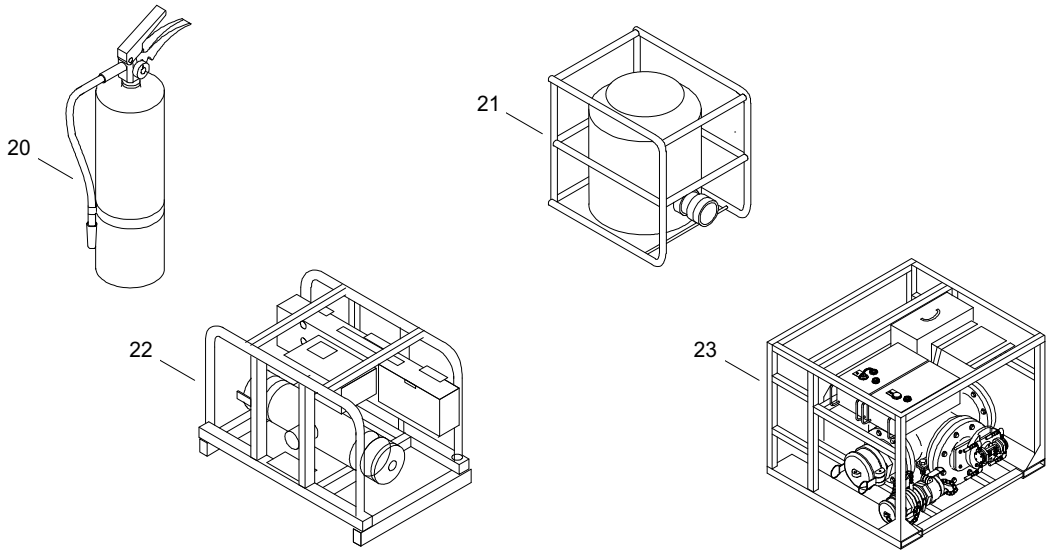
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
		BALL INLET 4.00 (33813) 90003		EA	1
		BALL INLET 6.00 (33813) 90005		EA	1
		BALL RECEIVER 4.00 (33813) 90004		EA	1
		BALL RECEIVER 6.00 (33813) 90006		EA	1
		CLAMP, HOSE(90598) 78059-9		EA	2
		PLATE, LOAD PLAN EVACUATION KIT (90598) 78136-1		EA	1
					
20	4210-00-965-1108	EXTINGUISHER, FIRE, DRY-CHEMICAL (HAND PORTABLE) (5N316) 429011		EA	29
21	4930-01-554-6137	FILTER-SEPARATOR, LIQUID FUEL frame mounted, 350 GPM capacity (0BUN9) MEFS18V350M		EA	4
22		FLOWMETER ASSEMBLY inline, 6 in. frame mounted (44674) LD02021-006		EA	2

Table 1. Component of End Item (COEI) – Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
23	4930-01-547-6265	FUEL ADDITIVE INJECTION ASSEMBLY (47186) TPI-4T-4A-1 Consisting of:		EA	1
		SCREW DRIVER MULTI-BLADE, 7 ½ IN. (47186) 162121		EA	1
		HEX KEY SET, FOLDABLE (47186) 162122		EA	1
		WRENCH, ADJUSTABLE 10 in. (47186) 1621223		EA	1
		PLIER, ADJUSTABLE 10 IN. (47186) 162124		EA	1
		WRENCH, ADJUSTABLE 8 IN. (47186) 162125		EA	1
		PLIER, SNAP RING .070 in., large (47186) 162127		EA	1
		HAMMER, SLEDGE, 4 lb. (47186) 162128		EA	1
		FSII SAMPLE TEST KIT (47186) 882378 Consisting of:		EA	1
		CASE, CARRYING (47186) HB-P-Ca		EA	1
		REFRACTOMETER (47186) HB-R-1		EA	1
		FUNNEL SEPARATORY (47186) HB-F-1		EA	1
		CYLINDER, GRADUATED, 250 ML (47186) HB-G-1		EA	1
		SUPPORT STAND ASSEMBLY (47186) HB-S-1		EA	1
		DISHES, ALUMINUM FOIL, 100 CT. (47186) HB-D1		EA	1

Table 1. Component of End Item (COEI) – Continued.

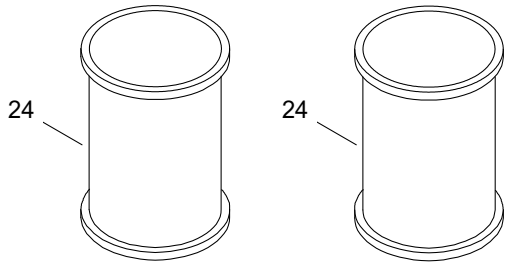
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
		PIPET, PISTON STYLE, 3 ML (47186) HB-P-1		EA	5
					
24	4235-01-542-8174	FUEL SPILL CONTROL KIT (0N5W4) 59359TY11 Consisting of:		EA	2
		DRUM, 55 GALLON POLY (0N5W4) POLY55		EA	2
		PADS, OIL ONLY, 17 in. X 19 in. (0N5W4) EP100		EA	60
		PARTICULATE, OIL ONLY 25 lb bag (0N5W4) EPLP25		EA	3
		SOCK, OIL ONLY 3 in. X 10 ft (0N5W4) PS10		EA	12
		PILLOW, OIL ONLY 10 in. X 10 in. (0N5W4) PIL10		EA	48
		BAG, DISPOSABLE 6 mil (0N5W4) DB6		EA	24
		TIE, CABLE (0N5W4) TYB		EA	48
		GLOVES, OIL RESISTANT #9 (0N5W4) GLO		EA	4
		GLOVES, OIL RESISTANT #11 (0N5W4) GLO		EA	2
		PAIL, 5 GAL. w/bail & lid (0N5W4) BUK5		EA	4
		HAZ-MAT LABEL 8 in. X 12 in. (0N5W4) LABC		EA	2
		DRIP PAN RECTANGULAR, PLASTIC NESTABLE (0N5W4) ODP12		EA	48

Table 1. Component of End Item (COEI) – Continued.

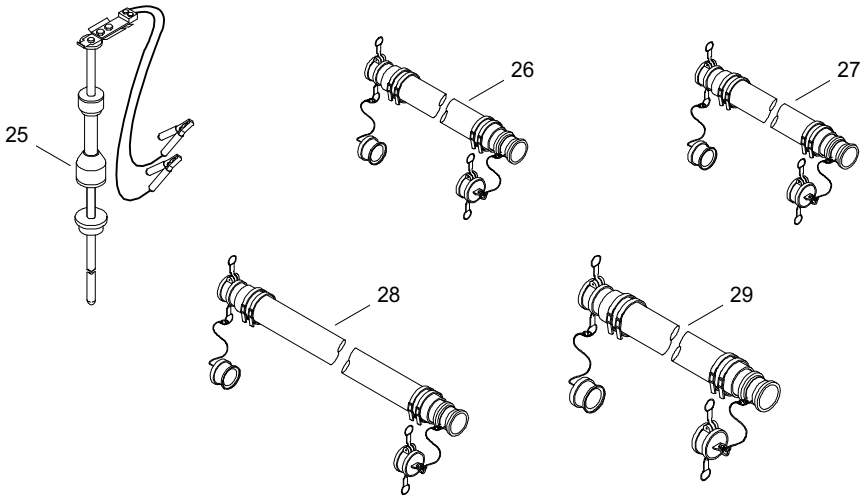
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
					
25	5975-01-056-5707	GROUND ROD ASSEMBLY self-driving (97403) 13219E0462		EA	11
26	4720-01-543-6000	HOSE ASSEMBLY, DISCHARGE 2 in. X 50 ft, valved dry-break (90598) 78009-100		EA	6
27		HOSE ASSEMBLY, DISCHARGE 6 in. X 10 ft (15886) 301.1061		EA	65
28	4720-01-542-6906	HOSE ASSEMBLY, DISCHARGE 4 in. X 25 ft (33813) 78007-102		EA	17
29	4220-01-262-5146	HOSE ASSEMBLY, SUCTION 4 in. X 10 ft (15886) M370B091A0100A		EA	22

Table 1. Component of End Item (COEI) – Continued.

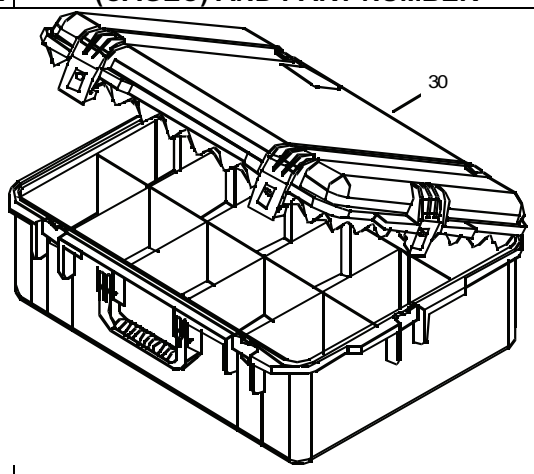
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
					
30		HOSE REPAIR KIT (15886) 301.0411 Consisting of:		EA	1
		CONTAINER, REUSABLE, 29L X 18W X 10.5H (300.384) Im2950		EA	5
		INSERT, FOAM, iM2950 300.385		EA	5
		CARD HOLDER, REUSABLE CASE 300.388		EA	10
		HOSE SPLICE KIT 2 in. (33813) 85660200SK		EA	3
		HOSE SPLICE KIT 3 in. (33813) 85660300SK		EA	2
		HOSE SPLICE KIT, 4 in. (33813) 85660400SK		EA	14
		SPLICE, HOSE, KIT 6 in. (33813) 8566060HSK		EA	10
		GROUND WIRE 20 ft (39428) 8873K53		EA	1
		FRAME, HACKSAW 12 in. (55719) HS18A		EA	1
		BLADE, HACKSAW 12 in. (55719) HSBM1218B		EA	10
		PLIERS, NEEDLE NOSE (55719) 95BCP		EA	1
		SCREW DRIVER, FLAT (53800) 00947195000		EA	1
		HAMMER, BALL PEIN (53800) 00938464000		EA	1
	5120-00-321-1536	KNIFE, PUTTY, FLEXIBLE, 1 1/4” WIDE BLADE (53800)		EA	1

Table 1. Component of End Item (COEI) – Continued.

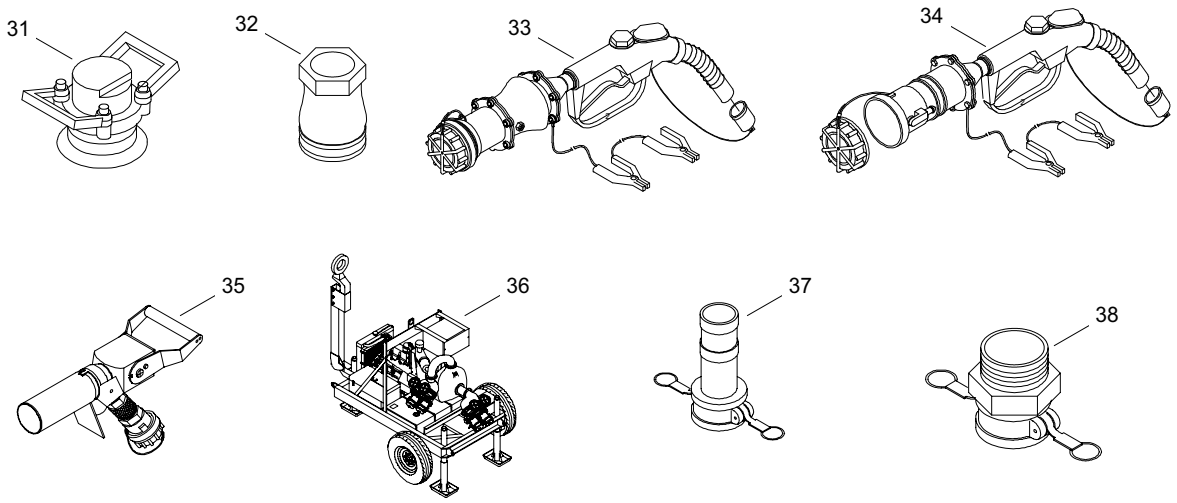
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
		TOOL, PUNCH-LOK (77414) P-1000 WRENCH, FLEX SOCKET/OPEN END 9/16” (300.3991) 5435A55		EA EA1	1
					
31	4930-01-543-4937	NATO STANDARD ADAPTER OR TANK UNIT male half (IKL62) 7475C-1307		EA	2
32	4730-01-543-6052	NATO STANDARD CONNECTOR OR HOSE UNIT female half (IKL62) 7474C-1107		EA	2
33	4930-01-543-4269	NOZZLE ASSEMBLY, FUEL AND OIL SERVICING 1 in. w/2 in. non-valved dry-break (0DT23) 64210		EA	2
34	4930-01-544-2307	NOZZLE ASSEMBLY, FUEL AND OIL SERVICING 1.5 in. w/2 in. non-valved dry-break (0DT23) 64199		EA	2

Table 1. Component of End Item (COEI) – Continued.

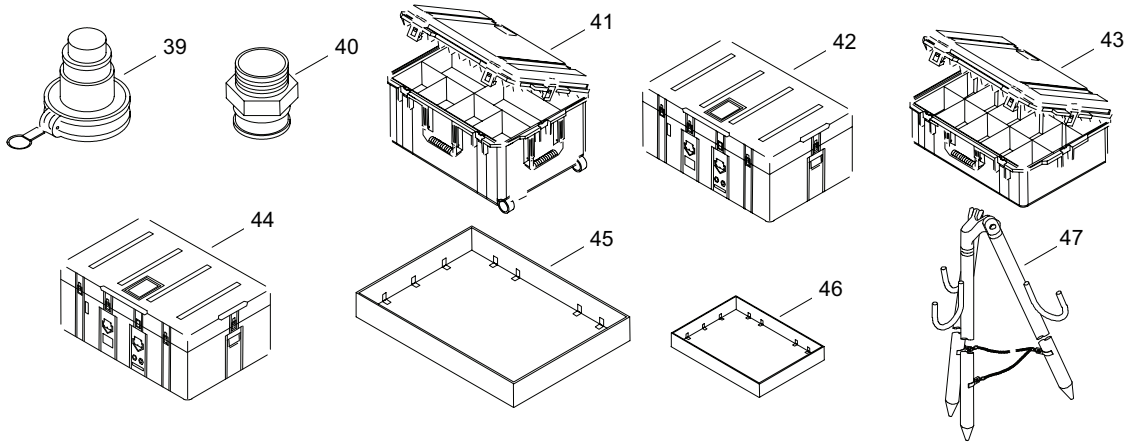
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
35	4930-01-383-9467	NOZZLE, CLOSED-CIRCUIT REFUELING standard, w/2 in. non-valved dry-break (0DT23) 64017B		EA	2
36		PUMPING ASSEMBLY 600 GPM (90598) 78023-100		EA	2
37	4730-01-543-8429	REDUCER 2 in. female X 1.5 in. male w/gaskets and locking cam arms (33813) 602620151		EA	2
38	4730-01-548-0899	REDUCER 4 in. female X 3 in. male w/gasket and locking cam arms (33813) 602640301		EA	6
					
39	4730-01-548-2611	REDUCER 4 in. female X 2 in. male w/gasket and locking cam arms (33813) 602640201		EA	1

Table 1. Component of End Item (COEI) – Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
40	4730-01-548-3573	REDUCER 4 in. male X 3 in. female w/gasket and locking cam arms (33813) 602630401		EA	3
41	8145-01-543-4987	SHIPPING AND STORAGE CONTAINER 32.75 in. long X 20.87 in. wide X 19.31 in. high (11214) AL3018-1502		EA	1
42	5820-01-539-3388	SHIPPING AND STORAGE CONTAINER 24.6 in. long X 19.7 in. wide X 14.4 in. high (11214) IM2750		EA	7
43	8145-01-543-6044	SHIPPING AND STORAGE CONTAINER 31.3 in. long X 20.4 in. wide X 12.2 in. high (11214) IM2950		EA	13
44	8145-01-543-6030	SHIPPING AND STORAGE CONTAINER 24.6 in. long X 19.7 in. wide X 8.8 in. high (11214) IM29700		EA	3
45	4235-01-542-8184	SPILL CONTAINMENT BERM 4 X 4 X 1 ft (0N5W4) 4804-TN-SU		EA	6
46	4235-01-548-0855	SPILL CONTAINMENT BERM 6 X 8 X 1 ft (0N5W4) 48-688-TN-SU		EA	7
47	4930-01-120-7426	STAND ASSEMBLY, NOZZLE AND VALVE (97403) 13225E9140		EA	11

Table 1. Component of End Item (COEI) – Continued.

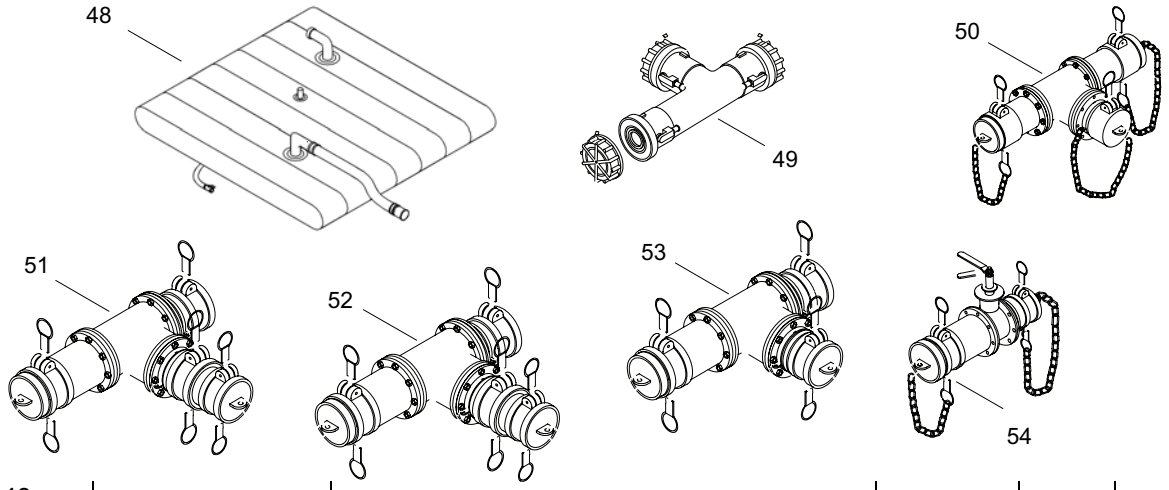
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
					
48	5430-01-505-4249	TANK, COLLAPSIBLE, FUEL 210,000 gallon (1YFX5) GTA-210K		EA	4
49	4730-01-297-6812	TEE ASSEMBLY 2 in. valved dry-break (0DT23) 64022D		EA	2
50		TEE ASSEMBLY 6 in. female X 6 in. female X 6 in. male (15886) 300.2433		EA	3
51	4730-01-543-2041	TEE ASSEMBLY 4 in. female X 4 in. male X 4 in. female (90598) 78021-100		EA	1
52		TEE ASSEMBLY 6 in. female X 6 in. male X 6 in. male (90598) 78027-100		EA	4
53		TEE ASSEMBLY 6 in. male X 6 in. female X 4 in. male (33813) 78026-100		EA	10

Table 1. Component of End Item (COEI) – Continued.

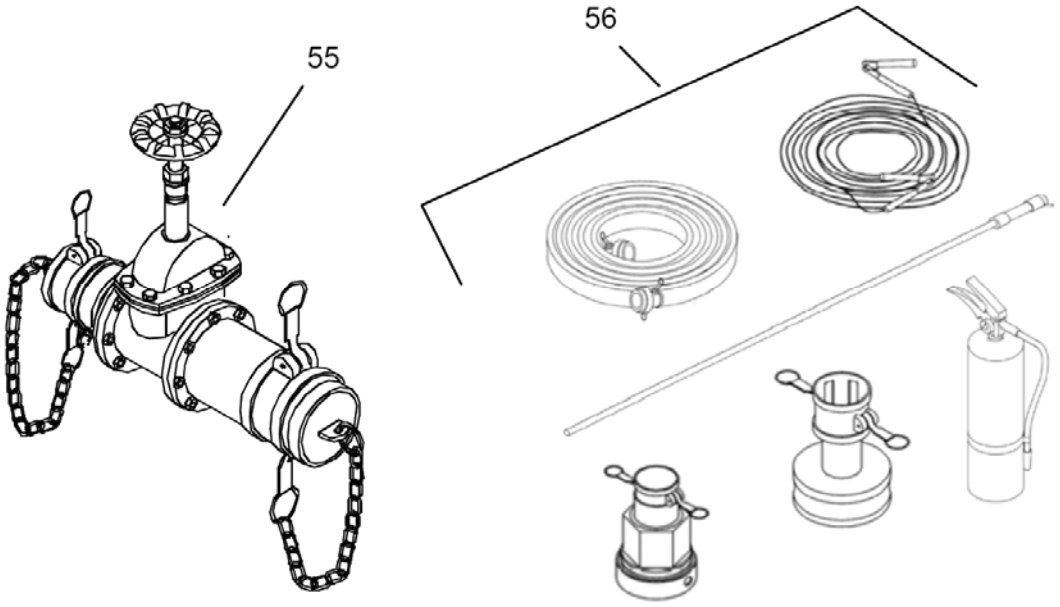
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
54	4820-01-542-8299	VALVE ASSEMBLY, BUTTERFLY 4 in. X 4 in. (90598) 78042-100		EA	9
					
55	4820-01-210-5605	GATE VALVE ASSEMBLY 4 in. female X 4 in. male (97403) 13228E3435		EA	17
56		WET WING DEFUELING ASSEMBLY (90598) 78029-100 Consisting of:		EA	1
	4720-01-543-9664	HOSE ASSEMBLY, DISCHARGE 3 in. X 50 ft, valved dry-break (90598) 78010-100		EA	4
	4730-01-543-5141	ADAPTER 4 in. male camlock X 3 in. valved dry-break (90598) 64031PQ		EA	1

Table 1. Component of End Item (COEI) – Continued.

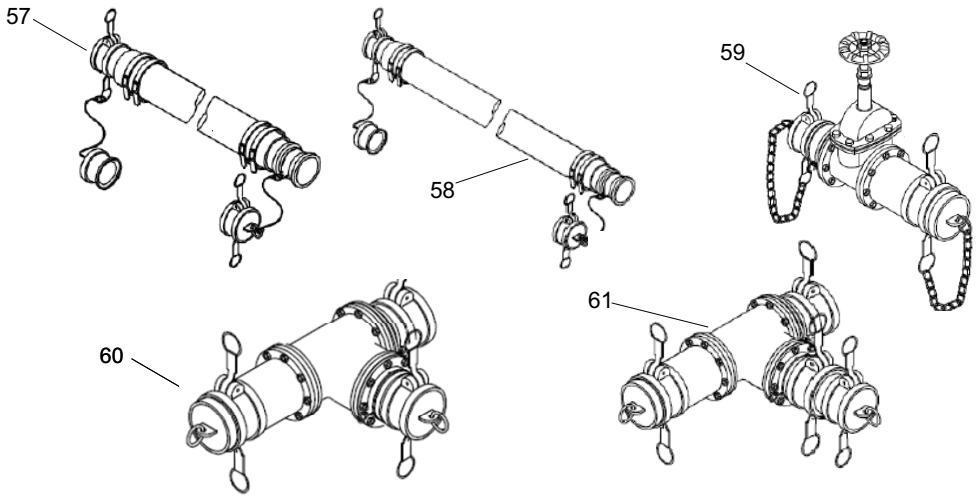
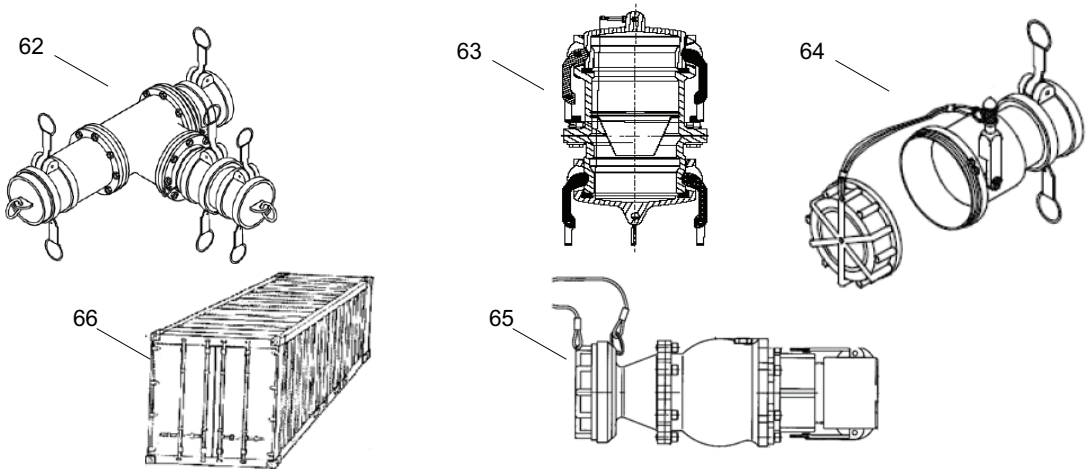
(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
	4730-01-474-2853	ADAPTER 4 in. female camlock X 3 in. valved dry-break (90598) 64031MQ		EA	1
	5975-01-548-5214	GROUND ROD ASSEMBLY self-driving (90598) 78043-100		EA	1
	5975-01-050-5707	EXTINGUISHER, FIRE DRY CHEMICAL (5N346) 429011		EA	1
		CLIP, ELECTRICAL, BATTERY CLIP STYLE (MIL-C-83413)		EA	4
		ROPE, WIRE, FLEXIBLE, TYPE II		EA	2
					
57		HOSE ASSEMBLY, SUCTION, 6 IN. X 10 FT (15866) 301.109		EA	45
58		HOSE ASSEMBLY, DISCHARGE, 6 IN. X 25 FT. (90598) 78008-100		EA	5
59	6680-01-250-7721	VALVE ASSEMBLY, GATE 6 IN. (LH-F, RH-M)		EA	16
60		TEE ASSEMBLY, 6 IN. MALE X 6 IN. FEMALE X 4 IN. FEMALE (15886) 300-2432		EA	5

Table 1. Component of End Item (COEI) – Continued.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/I	(6) QTY RQR
					
61		TEE ASSEMBLY, 6 IN. FEMALE X 6 IN. MALE X 6 IN. FEMALE (15886) 300.2431		EA	4
62		TEE ASSEMBLY, 6 IN. FEMALE X 6 IN. MALE X 4 IN. MALE (15886) 300.2434		EA	1
63	4730-01-540-4264	STRAINER, IN-LINE 4 IN (41592) 735SBA4000ASAJ		EA	3
64		ADAPTER FEMALE 2 in. QUICK DISCONNECT X 2 in. VALVED DRY-BREAK (41592) 435BA-4060AC		EA	2
65		REGULATOR, PRESSURE, 2F INLET, 2 UNISEX OUTLET WITH ALLEN WRENCH (64294)		EA	1
66		CONTAINERS, ISO (0PPD1) BX2ACTP01DOOOO		EA	6

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

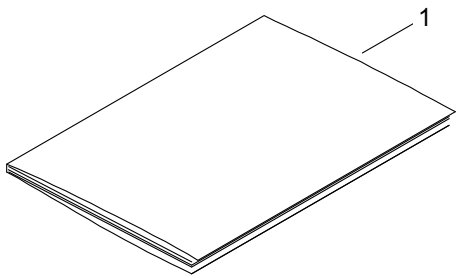


Table 2. Basic Issue Items (BII).

(1) ITEM NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, (CAGEC) AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
1		Technical manual, TM 10-4930-363-13		EA	1
2	5120-01-116-6996	Mallets		EA	4
3	5120-00-237-6985	Screw drivers		EA	4
4	5120-00-227-6704	Socket, socket wrench		EA	1
5	5120-00-240-5364	Handle, socket wrench		EA	1
6	5120-00-244-4389	Wrench, bung, A-A-2492		EA	1

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ADDITIONAL AUTHORIZATION LIST (AAL)

ADDITIONAL AUTHORIZATION LIST

INTRODUCTION

SCOPE

This work package lists additional items you are authorized for the support of the FSSP.

GENERAL

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

EXPLANATION OF COLUMNS IN THE AAL

Column (1) - National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) - Description, Commercial and Government Entity Code (CAGEC) and Part Number (P/N). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (in parentheses) and the part number.

Column (3) - Usable On Code. When applicable, gives you a code if an item you need is not the same for different models of equipment. These codes are identified below:

Column (4) - Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) - Qty Recm. Indicates the quantity recommended.

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List

National Stock Number	Description, Cage C and Part Number	Usuable On Code	U/I	QTY RECM
4310-01-158-3262	COMPRESSOR UNIT, ROTARY (33968) 35083880		EA	1
6630-01-347-9670	TESTING KIT, PETROLEUM, aviation fuel contamination (90598)		EA	1

END OF TASK

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
EXPENDABLE AND DURABLE ITEMS LIST (EDIL)

INTRODUCTION

SCOPE

This work package lists expendable and durable items that you will need to operate and maintain the 800K Fuel System Supply Point (FSSP) System. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

EXPLANATION OF COLUMNS IN THE EXPENDABLE/DURABLE ITEMS LIST

Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item (e.g., “Use antiseize compound (WP 0216, item 1).

Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

(C = Operator/Crew, O = Service, F = Field, H = Below Depot, D = Depot)

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 (CAGEC) 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) indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (3).

EXPENDABLE AND DURABLE ITEMS LIST

Table 1. Expendable and Durable Items List (EDIL).

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, (CAGEC) AND PART NUMBER	(5) U/I
1	F	8030-01-044-5034	Antiseize compound graphite and petroleum, one pound can for use on threaded fasteners and fittings (80348) MIL-T-5544	CN
2	C	8415-00-634-5023	Apron, utility 45 in. long X 35 in. wide, rubber chloroprene, black (64067) 8415-00-634-5023	EA
3	O		Clamp preformed P-16-S	EA
4	C	6850-01-474-2302	Cleaning compound, solvent (81349) MIL-PRF-680	GL
5	C	7920-00-044-9281	Cloth, cleaning (51200) MIRACLEWIPEL001	BX

Table 1. Table Expendable And Durable Items List (EDIL) – Continued.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, (CAGEC) AND PART NUMBER	(5) U/I
6	O	9150-01-117-2928	Grease, ball and roller bearing (81349) DOD-G-24508	CN
7	H	6810-00-753-4993	Isopropyl alcohol, technical 8 fl oz can, grade A, liquid (89264) 2200200	OZ
8	O	4235-01-542-8174	Kit, fuel spill control (0N5W4) 59359TYII	EA
9	O	9150-00-250-0926	Petrolatum technical (81348) VV-P-236	LB
10	H		Seal, lead (44674) A01135-000	EA
11	O	8030-01-431-3582	Sealing compound PST (05972) 567	EA
12	H	8030-01-014-5869	Sealing compound loctite 242 (05972) 24231	EA
13	O		Tape, teflon 0.5 in. wide X 36 yards long (0DT23) 547teflon-3m	RL
14	C		Tape, teflon 0.75 in. wide, 0.003 in. thick (39428) 6802K44	RL
15	H		Wire 20 gage (44674) 403796-020	EA
16	O	9505-01-054-2676	Wire, non-electrical steel; passivated surface treat; 0.032 in. thk; 381 ft per roll (80205) MS20995C32	RL
17	O	4240-00-203-3804	Goggles, Industrial	PR
18	O	8415-00-641-4601	Gloves, Rubber	PR
19	O		Bearing, Ball	EA
20	O	7240-01-543-4422	Pan, Drain	EA

END OF TASK

END OF WORK PACKAGE

OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE MANDATORY REPLACEMENT PARTS LIST (MRPL))

INTRODUCTION

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 (MRPL) Semiannual.

ITEM NO.	PART NUMBER/ (CAGEC)	NATIONAL STOCK NUMBER	NOMENCLATURE	QTY
1	600-001-10 (83259)	5330-00-603-0195	Packing	1
2	101038 (47186)		Washer, lock	8
3	101490 (15886)		Seal, lip	1
4	102460 (15886)		Gasket	2
5	102480 (47186)		O-ring	4
6	102482 (15886)		Gasket	1
7	103409 (47186)		O-ring	2
8	151002 (47186)	5331-01-395-7686	O-ring	2
9	151010 (47186)	5331-01-395-7687	O-ring	2
10	220464 (90598)		Bushing	3
11	220466 (90598)		Bushing	1
12	881083 (47186)		Washer, lock	8
13	881765 (15886)		O-ring	2
14	882076 (47186)		Washer, lock	32
15	882352 (47186)		Washer, lock	4

Table 1. Mandatory Replacement Parts List (MRPL) Semiannual – Continued.

ITEM NO.	PART NUMBER/ (CAGEC)	NATIONAL STOCK NUMBER	NOMENCLATURE	QTY
16	882949 (47186)		Washer, lock	40
17	220465 (0DT23)	5330-01-458-5461	Seal	1
18	220467 (0DT23)	5330-01-460-8998	Seal	1
19	220893 (0DT23)		Seal	1
20	201201-151 (ODT23)	5330-01-053-0217	O-ring	2
21	207807 (0DT23)	5330-01-247-1080	Seal, plain	1
22	210189 (0DT23)	5360-01-338-0240	Spring, helical, compression	1
23	220146 (ODT23)	5330-01-433-9203	Seal, plain	2
24	220157 (ODT23)	5330-01-456-9662	Seal, upstream	1
25	220158 (ODT23)	5330-01-456-9663	Seal, plain	1
26	220724-007 (0DT23)		Quad ring	1
27	221284 (0DT23)	5330-01-543-5609	Seal, downstream	1
28	235RF-020621 (41592)	5330-01-262-1363	Retainer, packing	1
29	235RF-02082P (41592)	5365-01-262-1339	Ring, packing	3
30	235RF-02092G (41592)	5330-01-262-1340	Gasket, valve bonnet	1
31	235RF-02212W (41592)	5310-01-265-5044	Washer, lock	8
32	23893 (0DT23)	4930-01-053-0187	Seal, outer piston	1
33	24085 (0DT23)	5303-01-053-0221	Gasket	1
34	4 INCH TTMA/ C4401 (2P653)		Gasket	6
35	5500215F (33813)		Gasket	1
36	5500220F (33813)	5330-01-454-2848	Gasket	1

Table 1. Mandatory Replacement Parts List (MRPL) Semiannual– Continued.

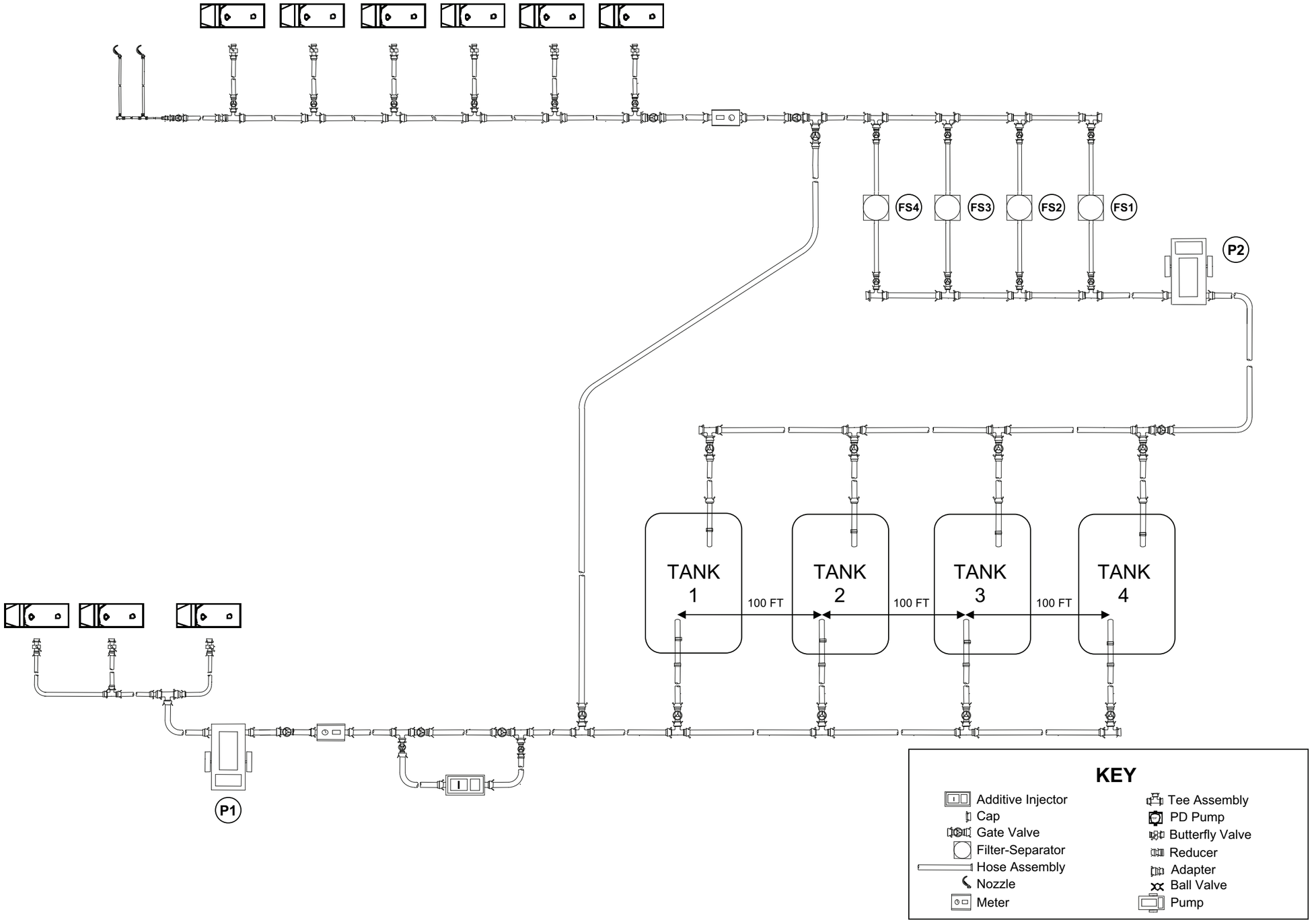
ITEM NO.	PART NUMBER/ (CAGEC)	NATIONAL STOCK NUMBER	NOMENCLATURE	QTY
37	5500230F (33813)	5330-01-138-2108	Gasket	1
38	5500240F (33813)		Gasket	1
39	A01544-048 (47674)	5310-01-543-6560	Washer, lock	1
40	KB01324-007 (44674)		Bearing insert kit	1
41	LA01527-104 (44674)	5330-01-544-6735	Seal, plain	1
42	LP526C1024R8 (0DT23)		Screw	1
43	M25988/1-235 (81349)	5331-01-007-4899	O-ring	1
44	M29512-03 (81343)	5331-01-263-8011	O-ring	1
45	MS27030-6 (96906)	5330-00-612-2414	Gasket	1
46	MS27030-8 (96906)	5330-00-088-9166	Gasket	1
47	MS27194-40 (81343)		Gasket	1
48	MS29512-03 (81343)	5331-00-263-8011	O-ring	1
49	MS29513-009 (81343)	5331-00-248-3834	O-ring	2
50	MS29513-010 (81343)	5331-00-248-3835	O-ring	1
51	MS29513-014 (81343)	5331-00-248-3840	O-ring	2
52	MS29513-016 (81343)	5331-00-248-3845	O-ring	2
53	MS29513-126 (81343)	5331-00-265-1076	O-ring	1
54	MS29513-133 (81343)	5331-00-291-7384	O-ring	1
55	MS29513-134 (81343)	5331-00-641-0119	O-ring	1
56	MS29513-147 (81343)	5331-00-531-4588	O-ring	1
57	MS29513-227 (96906)	5331-00-260-9338	O-ring	1

Table 1. Mandatory Replacement Parts List (MRPL) Semiannual – Continued.

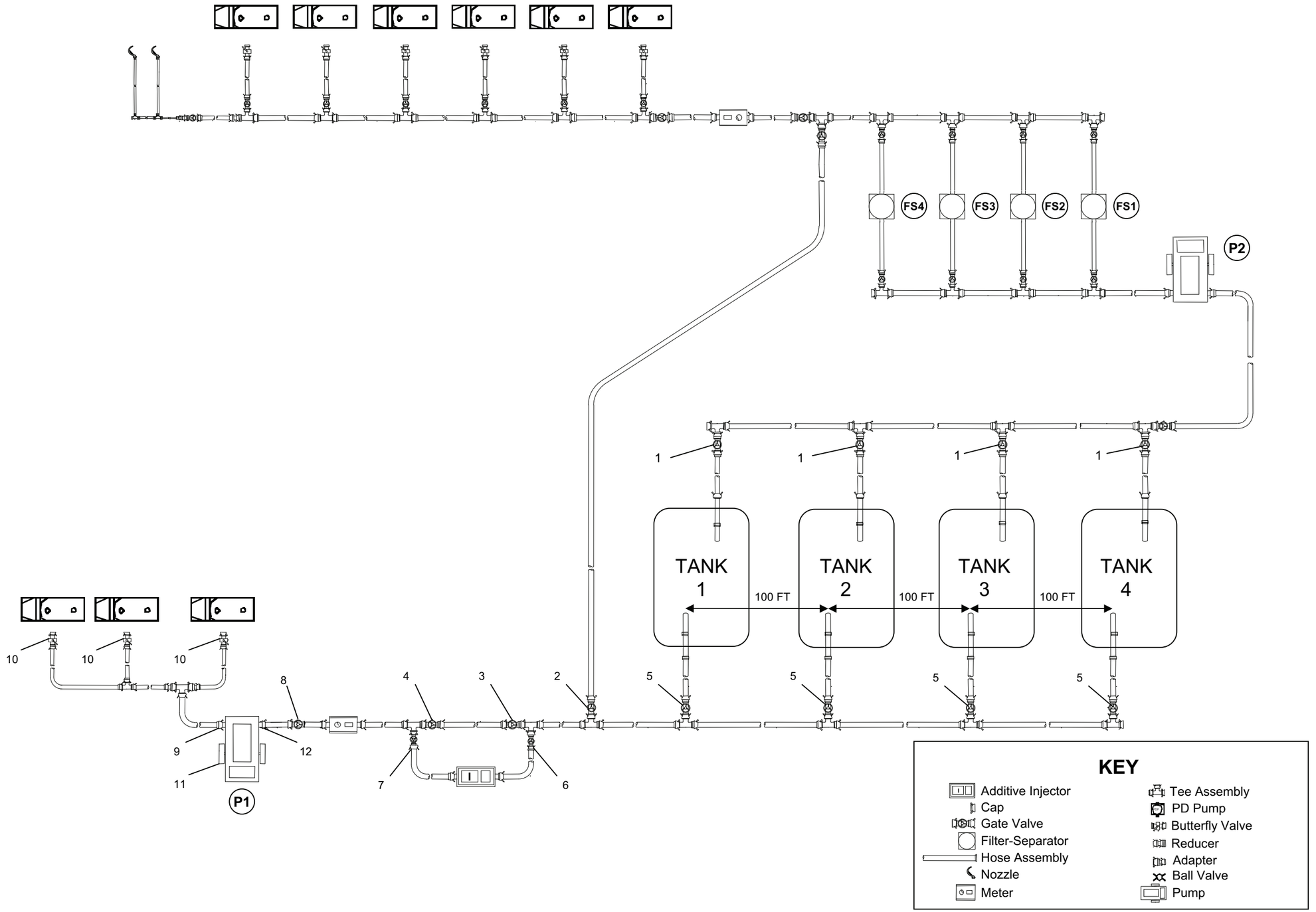
ITEM NO.	PART NUMBER/ (CAGEC)	NATIONAL STOCK NUMBER	NOMENCLATURE	QTY
58	MS29513-228 (81343)	5331-00-291-7337	O-ring	1
59	MS29513-229 (81343)	5331-00-291-3273	O-ring	1
60	MS29513-234 (81343)	5331-00-251-9367	O-ring	1
61	MS35338-46 (80205)	5310-00-637-9541	Washer, lock	150
62	735SBA4000ASAJ		Washer, lock	8
63	735SBA4000ASAJ		Gasket	1
64	64249-55		Gasket	2
65	LD02021-006		O-ring	2
66	LD02021-006		O-ring	1

END OF TASK

END OF WORK PACKAGE

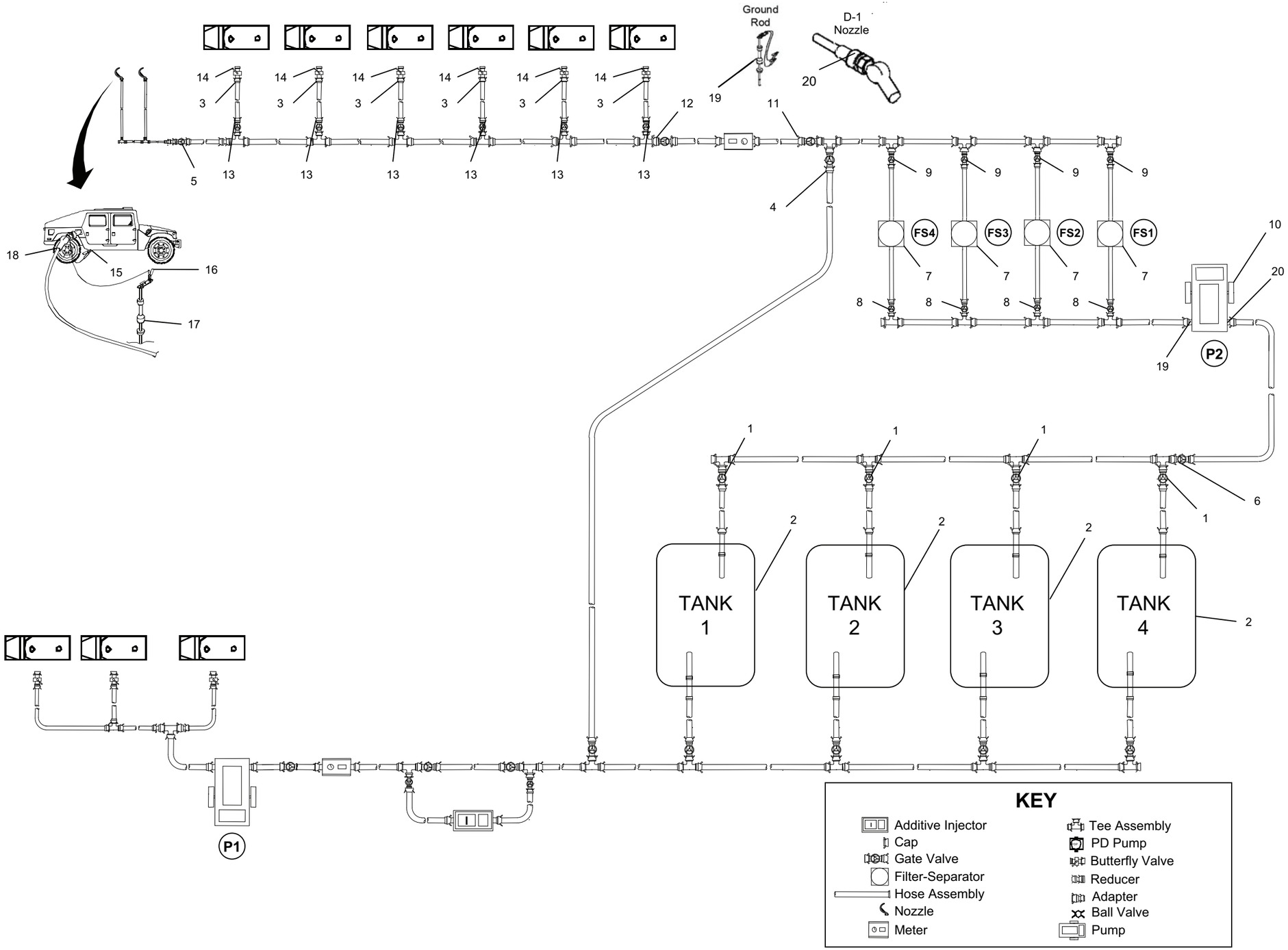


Assembled FSSP (Sheet 1 of 6)

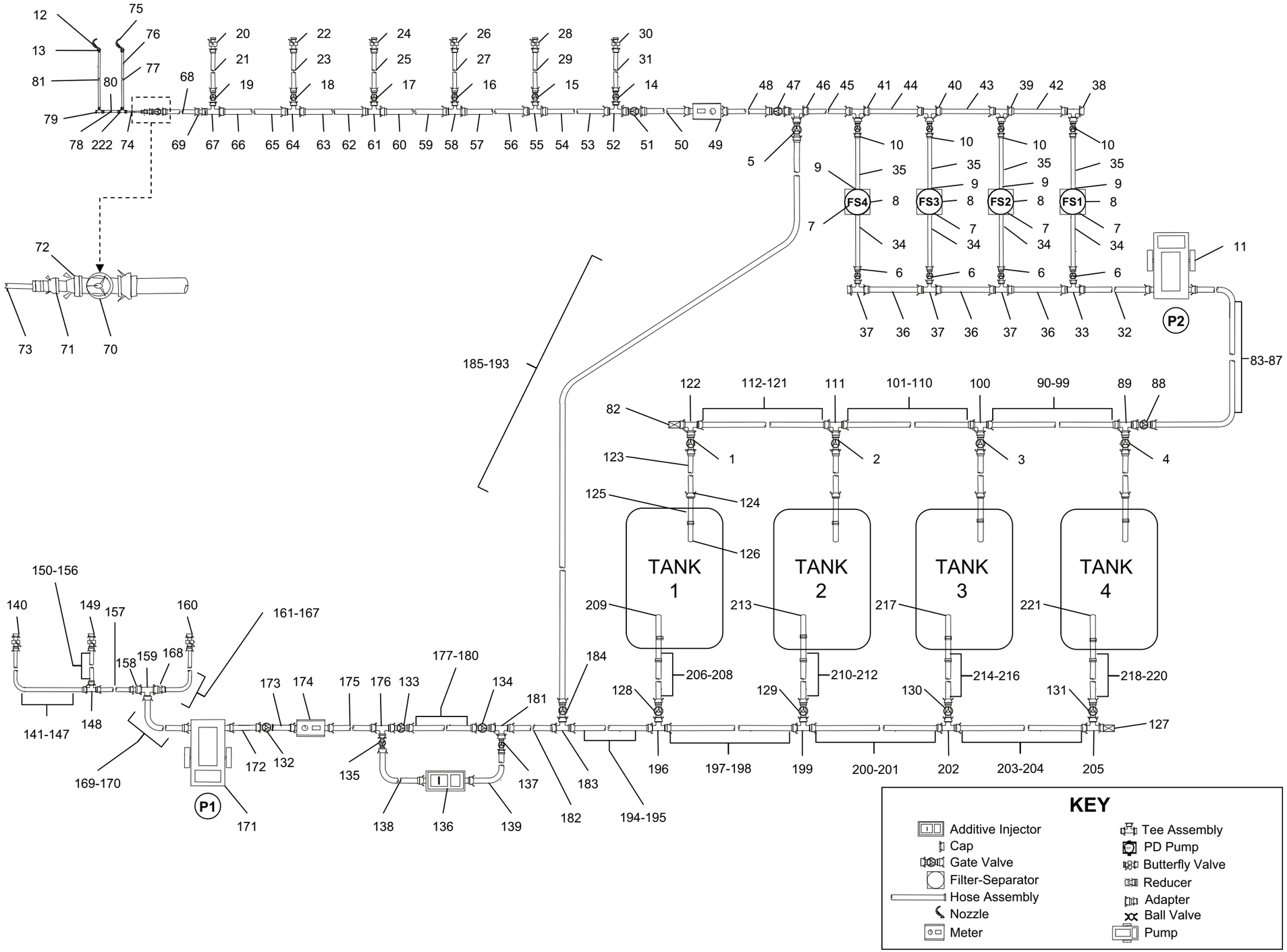


Storing Fuel in the FSSP (Sheet 2 of 6)

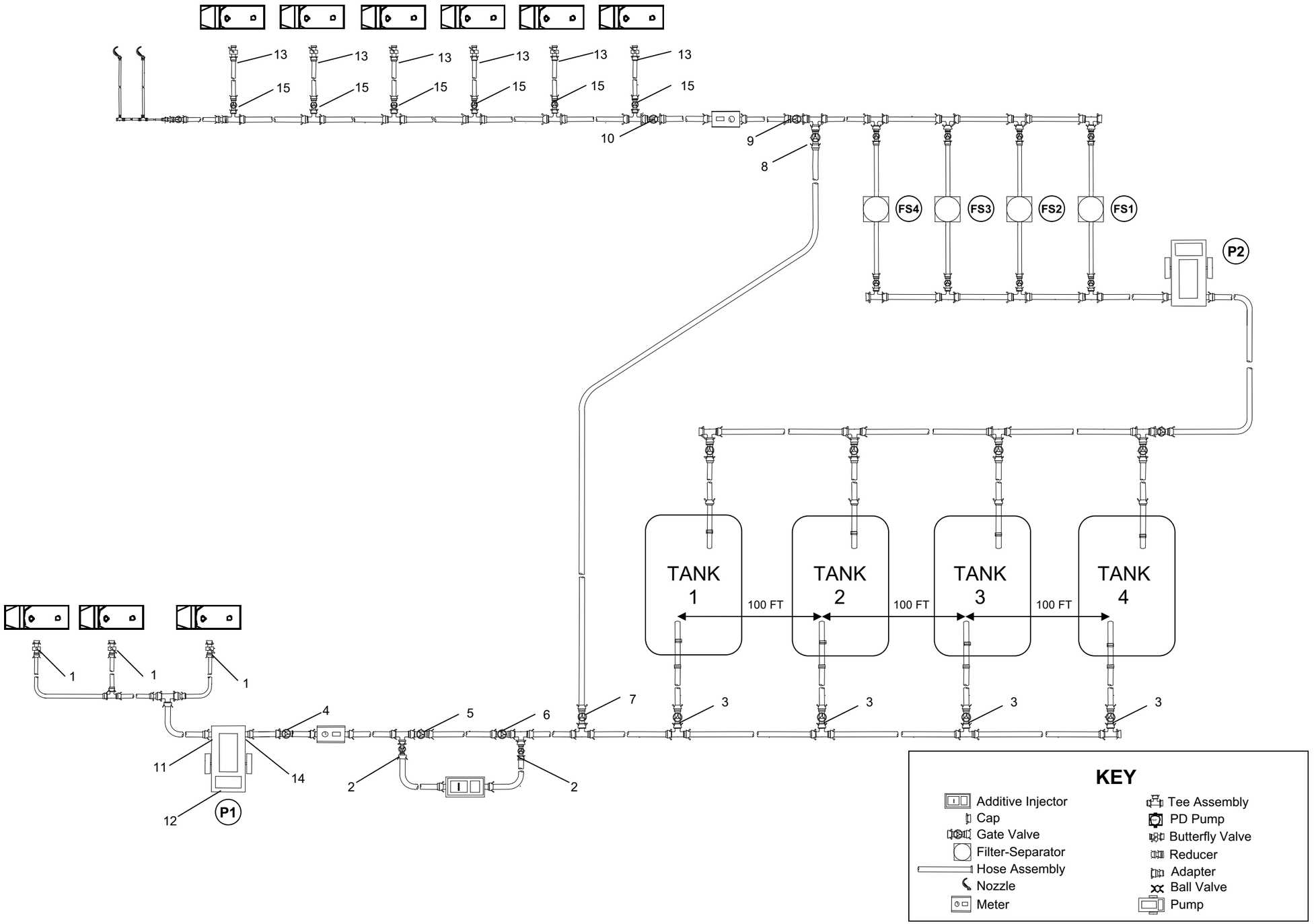
FO-2



Dispensing Fuel From the FSSP (Sheet 3 of 6)



Components of the FSSP (Sheet 4 of 6)



Bypass Procedures (Sheet 5 of 6)

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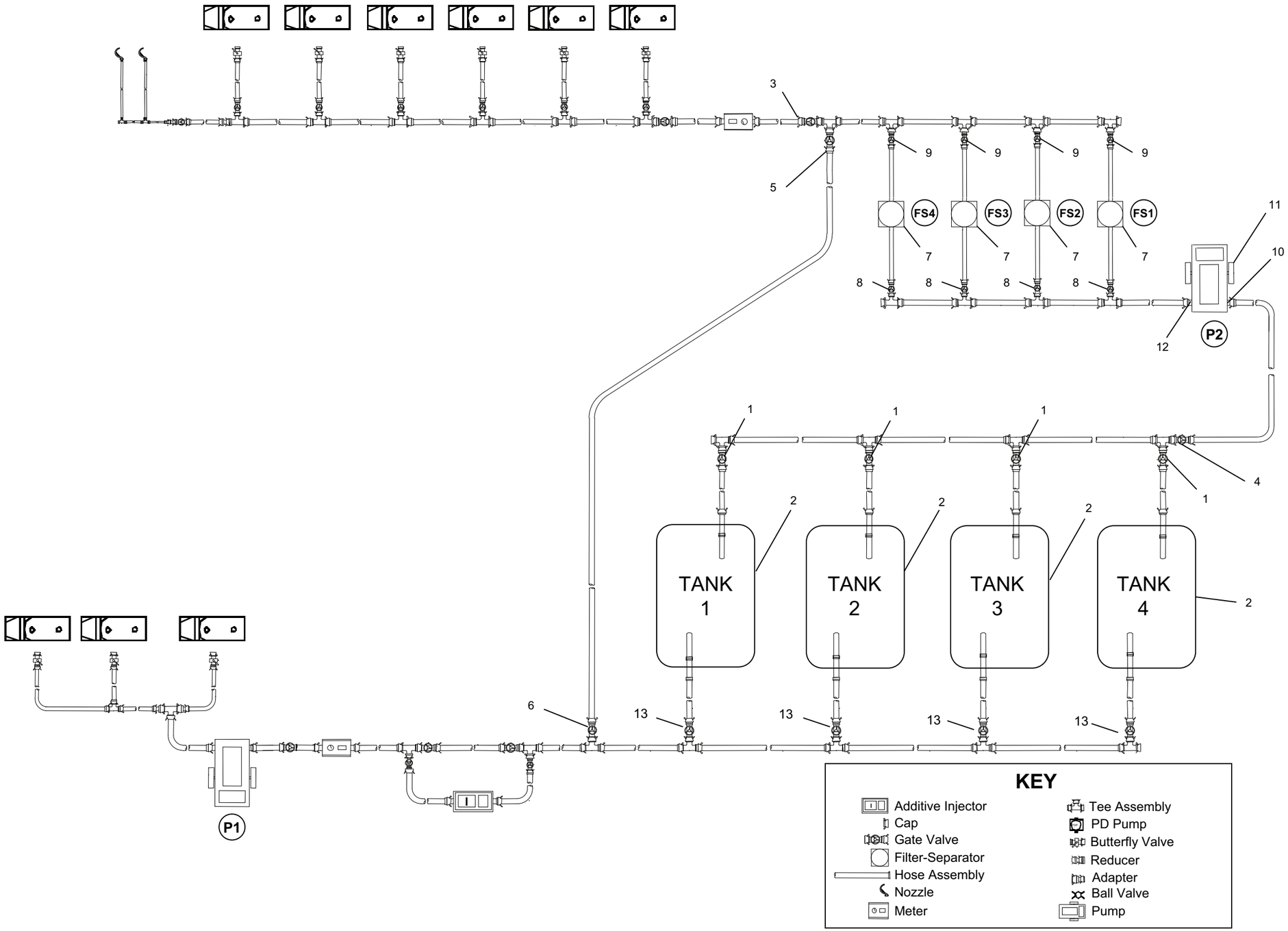

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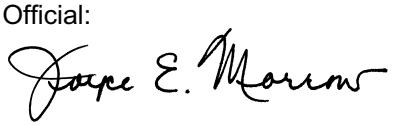
By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
1 Kilometer = 1,000 Meters = 0.621 Miles

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1,000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

TEMPERATURE

Degrees Fahrenheit (F) = ˚C • 9 ÷ 5 + 32
Degrees Celsius (C) = F˚ - 32 • 5 ÷ 9
212˚ Fahrenheit is equivalent to 100˚ Celsius
90˚ Fahrenheit is equivalent to 32.2˚ Celsius
32˚ Fahrenheit is equivalent to 0˚ Celsius

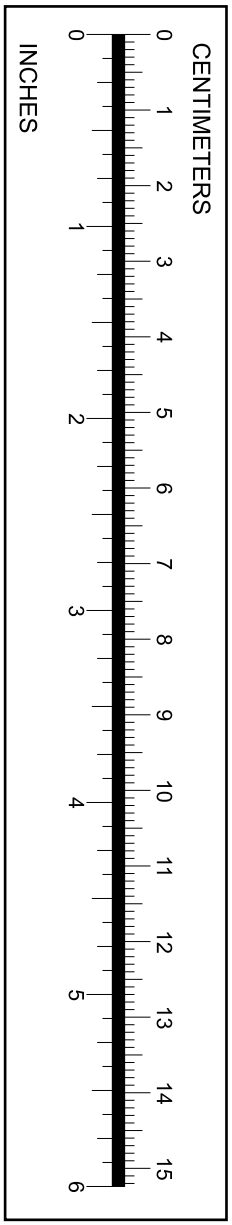
WEIGHTS

1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
1 Kilogram = 1,000 Grams = 2.2 Lb
1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Millimeters	25.4
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.4536
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds Per Square Inch	Kilopascals	6.895
Miles Per Gallon	Kilometers Per Liter	0.425
Miles Per Hour	Kilometers Per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Millimeters	Inches	0.03937
Centimeters	Inches	0.3937
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.2046
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds Per Square Inch	0.145
Kilometers Per Liter	Miles Per Gallon	2.354
Kilometers Per Hour	Miles Per Hour	0.621



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