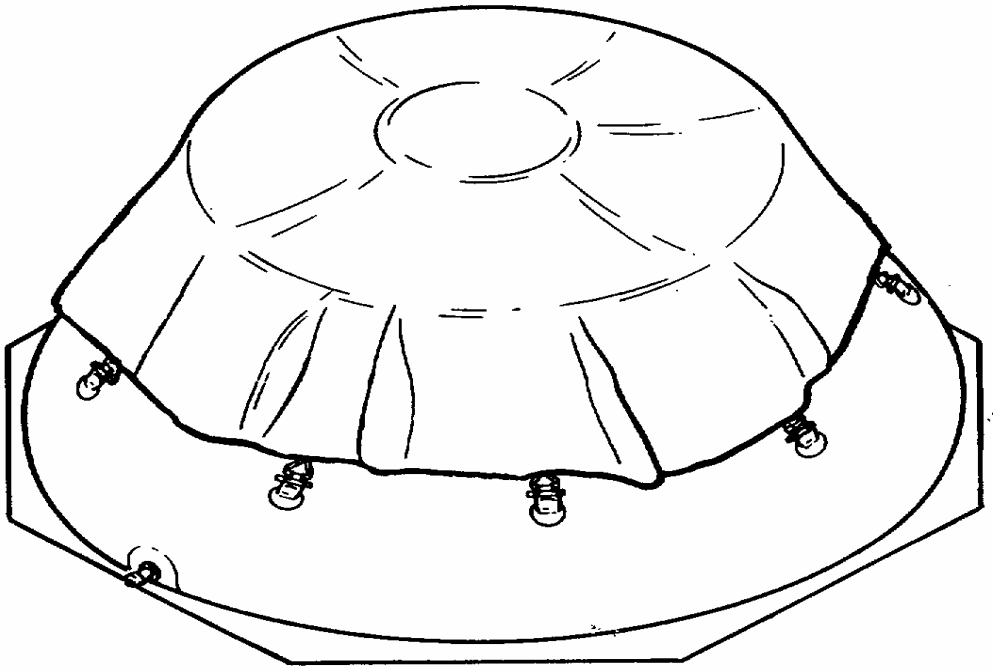
TECHNICAL MANUAL

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

TANK, FABRIC, COLLAPSIBLE; AIR COLUMN SUPPORTED, OPEN TOP, WATER STORAGE, 3,000 GALLONS MODEL 90074 (EIC=ZFV)/MODEL 91038/ MODEL WT2008 (EIC=ZIZ) (NSN 5430-01-359-4774)/(NSN 5430-01-318-9434)/ (NSN 5430-01-170-6984)

TANK, FABRIC, COLLAPSIBLE, SELF-SUPPORTING, SEALED TOP, WATER STORAGE, 3,000 GALLONS MODEL GTA-Z60TPW/MODEL 3-K-W-O-A/Z (NSN 5430-01-469-8744)/(NSN 5430-01-470-7380)



This manual supersedes TM 10-5430-233-12&P dated 29 October 1993, TM 5-5430-227-12&P dated 30 June 1989 and TM 5-5430-225-12&P dated 18 August 1988 including all changes.

HEADQUARTERS, DEPARTMENT OF THE ARMY AND AIR FORCE AND HEADQUARTERS, U.S. MARINE CORPS

15 OCTOBER 2000

DESTROY SUPERSEDED DATA.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

Dates of issue for the original manuals are:

Original 29 October 1993, TM 10-5430-233-12&P
30 June 1989, TM 5-5430-227-12&P
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TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 32 AND TOTAL NUMBER OF WORK PACKAGES IS 33 CONSISTING OF THE FOLLOWING:

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*Zero in this column indicates an original page.

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.

HEALTH HAZARD

The solvent and adhesive furnished in the repair kit for Models 90074, WT 2008, 91038 and GTA-Z60TPW are highly flammable and toxic to the skin, eyes, and respiratory tract. Skin/eye protection is required. Avoid prolonged breathing of vapors, and minimize skin contact. Good general ventilation is normally adequate. Keep away from excessive heat, open flame, or other sources of ignition.

Clean parts in a well-ventilated area. Avoid inhalation of solvent fumes and prolonged exposure to cleaning solvent. Wash exposed skin thoroughly. Solvent used to clean parts is potentially dangerous to personnel and. Do not use near open flame or excessive heat.

<u>For Model GTA-Z60TPW</u>:

The knife furnished in the repair kit is sharp. Improper use will result in injury.

FOR ARTIFICIAL RESPIRATION, REFER TO FM 21-11

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND AIR FORCE
AND HEADQUARTERS U.S. MARINE CORPS
WASHINGTON, D.C., 15 OCTOBER 2000

TECHNICAL MANUAL

OPERATOR'S AND UNIT MAINTENANCE MANUAL
(Including Repair Parts and Special Tools List)

TANK, FABRIC, COLLAPSIBLE; AIR COLUMN SUPPORTED, OPEN TOP WATER STORAGE, 3000 GALLONS
MODEL 90074 (EIC = ZFV)/MODEL 91038/MODEL WT2008 (EIC = ZIZ)
NSN 5430-01-359-4774/NSN 5430-01-318-9434/ NSN 5430-01-170-6984

TANK, FABRIC, COLLAPSIBLE, SELF-SUPPORTING, SEALED TOP, WATER STORAGE, 3000 GALLONS
MODEL GTA-Z60TPW/MODEL 3-K-W-O-A/Z
NSN 5430-01-469-8744/ NSN 5430-01-470-7380

Current as of 8 August 2000

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028-2 (Recommended changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or email your letter, DA Form 2028, or DA Form 2028-2 direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-LC-CIP-WT, Rock Island, IL 61299-7630. The email address is **TACOM-TECH-PUBS@ria.army.mil**. The fax number is DSN 793-0726 or Commercial (309) 782-0726. Marine Corps personnel submit NAVMAC 10772 Form to Commanding General, Marine Corps Logistics 1 Base, (Code 850), 814 Radford Blvd., Albany, GA, 31704-1128.

This manual supersedes TM 10-5430-233-12&P dated 29 October 1993, TM 5-5430-225-12&P dated 18 August 1988, and TM 5-5430-227-12&P dated 30 June 1989 including all changes.

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

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INDEX

HOW TO USE THIS MANUAL

Section I. OVERVIEW -This manual is divided into seven chapters consisting of 24 work packages and 9 appendices that provide all the information necessary to operate and maintain the collapsible fabric water tank assemblies.

Section II. INDEXING -This manual contains several types of indexes to help the user locate information quickly and efficiently. The different indexes are as follows:

a. Table of Contents. Lists all chapters, work packages, and appendices contained in the manual, along with the work package numbers where they begin.

b. Alphabetical Index. Located at the back of the manual, this index lists entries that personnel are most likely to look for. Most listings are provided several times in the index (i.e., "Maintenance Forms and Records" can also be found as "Forms and Records, Maintenance," and "Records, Maintenance Forms and"). This increases the likelihood of finding the information the first place you look. Each entry also lists the work package where the information can be found.

OPERATOR AND UNIT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) COLLAPSIBLE FABRIC TANKS, WATER STORAGE, 3000 GALLONS GENERAL INFORMATION

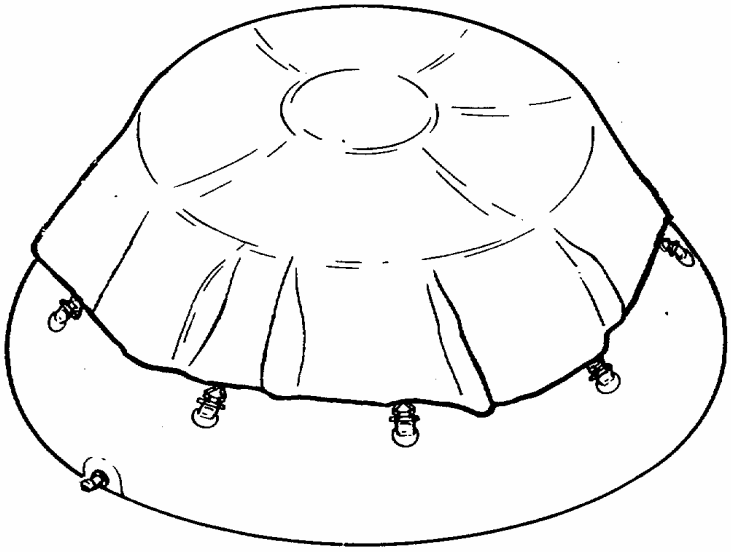
SCOPE

This technical manual contains instructions for operations, checks and corrective maintenance for the 3000 Gallon Water Storage Fabric Tanks.

Type of Manual: Operator and Unit Maintenance.

Model Number and Equipment Names: 90074, 3000 Gallon Water Storage Collapsible Fabric Tank, 91038, 3000 Gallon Water Storage Collapsible Fabric Tank, WT2008, 3000 Gallon Water Storage Collapsible Fabric Tank, 3-K-W-O-A/Z, 3000 Gallon Water Storage Self-Supporting Fabric Tank, and GTA-Z60TPW, 3000 Gallon Water Storage Self-Supporting Fabric Tank.

Purpose of Equipment: The tanks provide potable drinking water storage containers when quick storage facilities are needed and where permanent potable water storage facilities are not available or when the storage of potable water is needed only on a temporary basis.



NOTE: Model 90074 shown, others similar.

MAINTENANCE FORMS, RECORDS AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 738-750, The Army Maintenance Management System; DA PAM 738-751, Functional Users Manual for The Army Maintenance Management System Aviation (TAMMS-A); or AR 700-138, Army Logistics Readiness and Sustainability. Marine Corps users refer to TM 4700-15.

CORROSION PREVENTION AND CONTROL (CPC)

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

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Any 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 Standard Form 368, Product Quality Deficiency Report (Marine Corps users in accordance with MCO 4855.10A). Use of key words such as "rust," "deterioration," "corrosion," 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 738-750.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Command decisions, according to tactical situations, will determine when destruction of the collapsible fabric water tank assembly will be accomplished. A destruction plan will be prepared by the using organization, unless higher authority has already prepared one. For general destruction procedures for this equipment, refer to TM 750-244-3, Procedures for Destruction of Equipment to Prevent Enemy Use.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)

If your collapsible fabric water tank assemblies need 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 us at Commander, U.S. Army Tank-automotive and Armaments Command, AMSTA-LC-CIP-WT, Rock Island, IL 61299-7630. Marine Corps users shall use SF 368 in accordance with MCO 4855.10, Quality Deficiency Manual. Mail it to Commanding General, Code 856, Marine Corps Logistics Bases, 814 Bradford Blvd, Albany, GA 31704-1128.

PREPARATION FOR STORAGE OR SHIPMENT

Army users refer to Work Package 0024 00. Marine Corps users refer to MCOP 4550.7.

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Workmanship shall be of the highest quality and shall permit no defects not repaired in accordance with the instructions in this manual. All metal parts shall be clean and free of sand, dirt, etc. The inside and outside of the tank shall be clean and free of foreign material.

END OF WORK PACKAGE

CHAPTER 1

DESCRIPTION AND THEORY OF OPERATION

OPERATOR AND UNIT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) COLLAPSIBLE FABRIC TANKS, WATER STORAGE, 3000 GALLONS EQUIPMENT DESCRIPTION

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

Characteristics, capabilities, and features of the collapsible fabric water tank assemblies include:

a. Highly mobile.

b. Easily transportable.

c. Manually inflatable flotation collar (Models 90074, 91038 and WT2008 only).

d. Self-supporting on slopes up to 10%.

e. Quick setup/tear down.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

Refer to Chapter 2, WP 0004 00.

EQUIPMENT DATA

CAUTION

If the tank is used in temperatures below freezing [32°F (0°C)], caution must be used to prevent water in the tank, or in contact with metal parts, from freezing. If water freezes, damage may occur to the tank and/or metal parts.

OPERATING TEMPERATURE (AMBIENT)
- LOW.....32°F (0°C)
- HIGH..... +125°F (+51.7°C)

STORAGE TEMPERATURE (AMBIENT)
- LOW ..... -25°F (-31.7°C)
- HIGH..... +160°F (+71.1°C)

DIMENSIONS, OUTSIDE (PACKAGED)

MODELS 90074/3-K-W-O-A/Z:
- HEIGHT (DEPTH) .....27.7 inches (70.36 cm)
- WIDTH .....31.3 inches (79.5 cm)
- LENGTH .....45.3 inches (115.1 cm)
- WEIGHT .....135 pounds (61.2 kg)

MODEL 91038:
- HEIGHT (DEPTH) .....23 inches (58.4 cm)
- WIDTH .....28.5 inches (72.4 cm)
- LENGTH .....42.5 inches (108 cm)
- WEIGHT .....130 pounds (59 kg)

MODEL WT2008:
- HEIGHT (DEPTH) ..... 18 inches (0.45m)
- WIDTH ..... 25 inches (0.6m)
- LENGTH ..... 45 inches (1m)
- WEIGHT.....120 pounds (54.5 kg)

MODEL GTA-Z60TPW:
HEIGHT (DEPTH) ..... 13 inches (33.02 cm)
WIDTH ..... 44 inches (111.76 cm)
LENGTH ..... 63 inches (160.02 cm)
WEIGHT..... 140 pounds (63.63 kg)

DIMENSIONS, OUTSIDE (FILLED)
MODELS 90074/91038/3-K-W-O-A/Z
HEIGHT .....56 inches (1.4 meters)
BASE DIAMETER.....148 inches (3.8 meters)
TOP DIAMETER .....94 inches (2.4 meters)
MODEL WT2008:
HEIGHT .....54 inches (1.4 meters)
BASE DIAMETER .....144 inches (3.6 meters)
TOP DIAMETER .....120 inches (3 meters)
MODEL GTA-Z60TPW:
HEIGHT .....45 inches (114.30 cm)
BASE DIAMETER .....157 inches (398.78 cm)
TOP DIAMETER ..... 94 inches (238.76 cm)
WATER STORAGE CAPACITY..... 3,000 gallons (11.356 liters)

END OF WORK PACKAGE

**OPERATOR AND UNIT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
COLLAPSIBLE FABRIC TANKS, WATER STORAGE, 3000 GALLONS
PRINCIPLES OF OPERATION**

Refer to Chapter 2**.**

END OF WORK PACKAGE

CHAPTER 2

OPERATING INSTRUCTIONS
FOR
TANK, WATER STORAGE, 3000 GALLONS

OPERATOR AND UNIT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
COLLAPSIBLE FABRIC TANKS, WATER STORAGE, 3000 GALLONS
CONTROLS AND INDICATORS

GENERAL

This section lists major components, controls, and indicators, and describes their function within the collapsible fabric water tank assemblies.

DESCRIPTION AND USE OF MAJOR COMPONENTS

Description and use of major components, including controls and indicators, are contained in Table 1.

Table 1. Major Components, Controls and Indicators

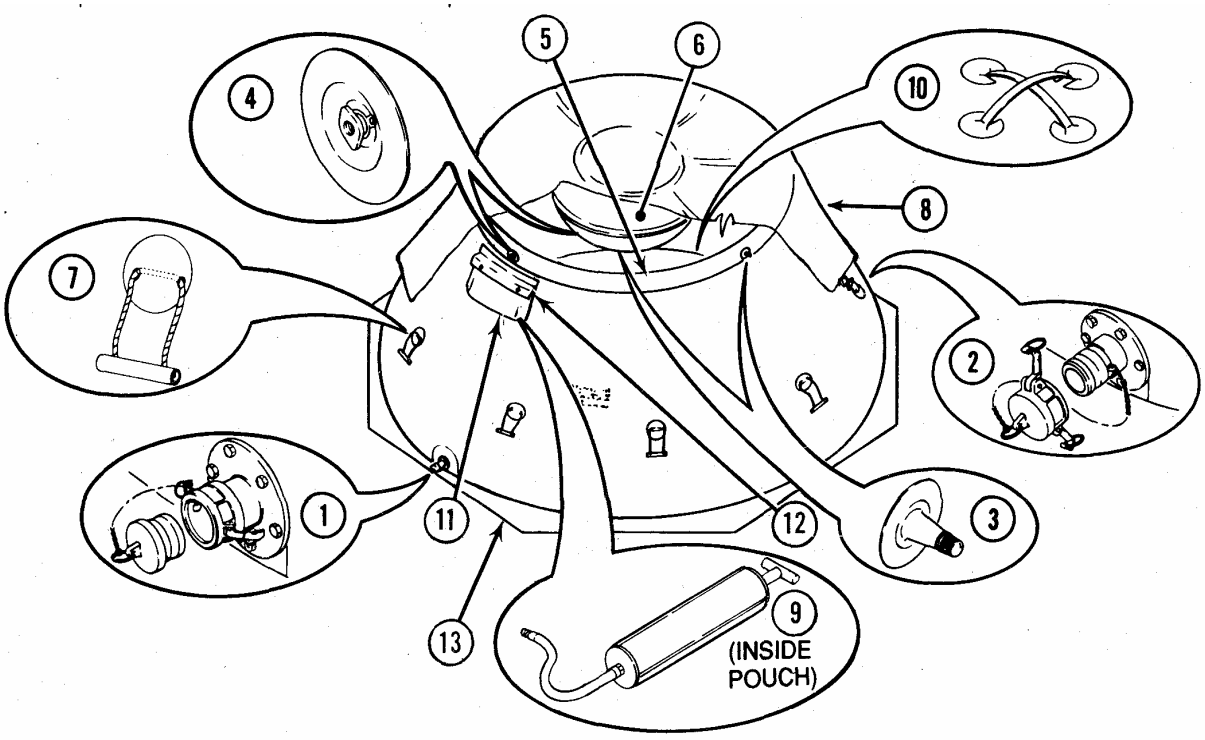
Key	Control or Indicator	Function
1	Fill/Discharge Fitting With Female Cam-Lock Coupling	Provides the means to remove water from the tank. This 2" (50.8 mm) male fitting can also be used to fill the tank. Accessed by removing the dust plug which is held in place with two cam-lever arms.
2	Fill/Discharge Fitting With Male Cam-Lock Coupling	Provides the means to remove water from the tank. This 2" (50.8 mm) male fitting can also be used to fill the tank. Accessed by removing the dust cap which is held in place with two cam-lever arms.
3	Automotive Valves	Models 90074/91038: There are two automotive valves: one in the tank collar and one in the cover float. The automotive valves provide attachment points for a standard, automotive type pump for inflating the tank collar and the cover float. Accessed by removing the valve cap. Model WT2008: Has one automotive valve located in the tank Collar.
4	Inflation Valve	Model 90074: There are two inflation valves: one in the tank collar and one in the cover float. The inflation valves provide an attachment point for the hand pump for inflating the tank collar and cover float. During use, the inflation valve is turned to "OPEN" position for inflating and deflating and to "CLOSE" position for holding air after inflation. Positions are stenciled on the tank collar and cover float. Model 91038: There are four inflation valves: three in the tank collar and one in the cover float. The inflation valves provide an attachment point for the foot bellows for inflating the tank collar and cover float. During use, the inflation valve is turned to "OPEN" position for inflating and deflating and to "CLOSE" position for holding air after inflation. Positions are stenciled on the tank collar and cover float. Model WT2008: There are three inflation valves: two for use with foot bellows and one automotive (Schrader valve) for air compressor or tire pump.
5	Tank Collar	Models 90074/91038/WT2008: The tank collar is inflated before filling the tank and allows the collar and tank to rise with the rising water level.
6	Cover Float	The inflatable float is part of the cover. For Models 90074 and 91038 only, the float is inflated prior to installing the cover over the tank and acts to support the cover. For Model WT2008, the float is inflated and secured in netting holder prior to installing the cover.
7	Handle-Toggles	Models 90074/91038/WT2008: The ten handle-toggles installed around the outside of the tank provide the attachment points for the ten cover handles for use in securing the cover to the tank and serve as lifting points for moving the empty tank.

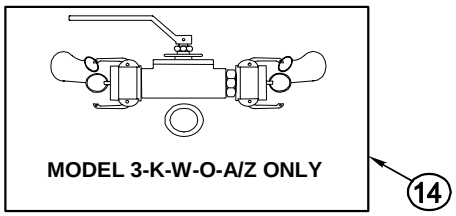
Table 1. Major Components, Controls and Indicators – Continued

Key	Control or Indicator	Function
8	Cover	Models 90074/91038/WT2008: The cover serves a dual purpose; when the tank is in use, the cover is installed over the top to prevent contamination of the drinking water; when the tank is not in use, the cover serves as the valise (carrying case). The cover provides ten handles around the outer edges, which attach to the ten handle-toggles for securing the cover to the tank on Models 90074 and 91038. Model GTA-Z60TPW: Cover is installed on the top of the tank using hooks and loops around the edges.
9	Hand Pump (Model 90074)	The hand pump provides the means of inflating the tank collar and cover float. The hand pump provides an integral hose with a male fitting which threads directly into any of the four inflation valves. The hand pumps are stored in the repair pouch on the outside of the tank. Hand pumps can be used without the hose if the hose is damaged.
	Foot Bellows (Models 91038 & WT2008)	The foot bellows provide the means of inflating the tank collar and cover float. The foot bellows provide an integral hose with a male fitting which threads directly into any of the four inflation valves. The foot bellows are stored in the repair pouch on the outside of the tank. Foot bellows can be used without the hose if the hose is damaged.
10	Lift Handles	There are two lift handles attached to the inside bottom of the tank. The handles are used for hanging the tank inside out to dry after use. Models WT 2008 and GTA-Z60TPW have a single loop at the center of the floor inside the tank for hanging out to dry.
11	Repair Pouch	The repair pouch is attached to the outside wall of the tank and is used to store the hand pump or foot bellows, repair kit and technical manual.
12	Repair Kit	The repair kit contains all items needed to perform emergency repair of cuts and punctures in the tank fabric. Repair kit items are stored in the repair kit pouch. Also included with the repair kit is a laminated instruction sheet, detailing fabric repair.
13	Ground Cloth	After tank site selection and removal of any debris that might damage the ground cloth or tank, the cloth is spread out flat to protect the bottom of the tank from abrasion and wear resulting from contact with the ground. The ground cloth is stored in the cover with the tank when not in use. Model GTA-Z60TPW has a ground cloth that serves as a valise to contain and carry the folded tank. It is equipped with two separate straps for lifting.
14	Ball Valve and Couplings (Models 3-K-W-O-A/Z and GTA-Z60TPW)	The ball valve assembly can be connected to the fill/discharge fittings on the tank and used as a shut-off when filling or emptying.

Table 1. Major Components, Controls and Indicators – Continued

Key	Control or Indicator	Function
15	Valise (Model WT2008)	Used as a carrying case for tank, cover, cover float, foot bellows and repair kit.
16	Deflation Valve (Model WT2008)	Located on the top side of the tank collar. This valve is used to deflate the tank collar.





NOTES: Model 90074 shown, typical.
Models 91038/WT2008 foot bellows not shown.
Model WT2008 valise and deflation valve not shown.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
OPERATION UNDER USUAL CONDITIONS

ASSEMBLY AND PREPARATION FOR USE

CAUTION

Damage to tank may occur if chosen site is not free of sharp objects (rocks, sticks, glass, etc.) and a 10 percent slope [1 foot (0.3 meter) rise in 10 foot (3 meters) run] is exceeded.

Unpacking the Equipment

1. Position the packaged tank on an approved site.

CAUTION

Use care when unpacking the tank. Tank can be easily damaged by tools, packing box nails, or other sharp objects.

NOTE

Each tank is provided with a suitable packing around the tank. Do not damage, throw away, or use packing as a tarp. Keep packing with original shipping container.

2. Carefully open shipping container and remove tank and packing material. If a tank is being replaced, package the unserviceable tank in the empty container in the same manner that the new tank was packaged.

3. Set tank on the ground, with the four carrying handles up (1).

4. Remove the four straps from the D-rings to release the bundle (2).

5. Unfold the cover sufficiently to permit removal of tank (3 through 7).

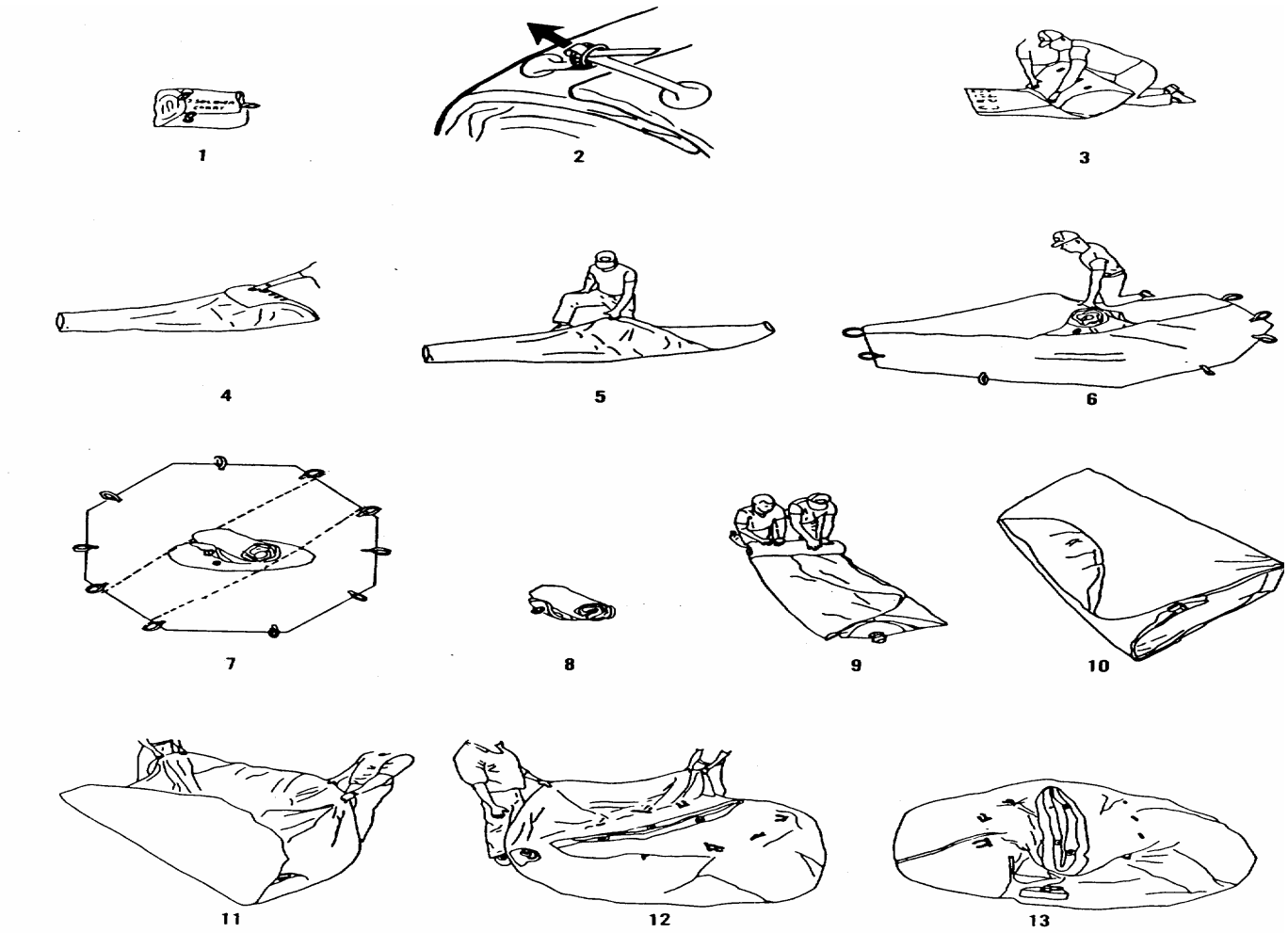
6. Remove all debris and material from installation area that could damage the tank or the ground cloth.

7. Other models, remove the ground cloth and unfold on the selected installation area. Smooth out all creases and wrinkles. If tears or cuts in the ground cloth can be spread out smooth and the damaged area will be held together by the weight of the tank, the ground cloth can still be used.

CAUTION

Do not walk on outside or inside of tank or cover, as damage and/or contamination may occur.

8. Lift tank from cover and set in center of installation area (8).



Assembly

1. Unroll the tank and unfold the sides (9 through 12).
2. Perform the before preventive maintenance checks and services (PMCS) WP 0009 00.
3. In the installation area (13), fully spread out the tank, open end up, on the pre-positioned ground cloth.

MODEL GTA-Z60TPW ASSEMBLY AND PREPARATION FOR USE

CAUTION

Damage to tank may occur if chosen site is not free of sharp objects (rocks, sticks, glass, etc.) and a 10 percent slope [1 foot (0.3 meter) rise in 10 foot (3 meters) run] is exceeded.

Unpacking the Equipment

1. Position the packaged tank on an approved site.

CAUTION

Use care when unpacking the tank. Tank can be easily damaged by tools, packing box nails, or other sharp objects.

NOTE

Each tank is provided with suitable packing around the tank. Do not damage, throw away, or use packing as a tarp. Keep packing with original shipping container.

2. Carefully open shipping container and remove tank and packing material. If a tank is being replaced, package the unserviceable tank in the empty container in the same manner that the new tank was packaged.

3. Remove all debris and material from installation area that could damage the tank or the ground cloth.

4. Set tank bundle on the ground in the center of the selected installation area (1).

5. Untie the straps to release the bundle (2). Note that the valise is also the ground cloth.

6. Unfold the valise/ground cloth on the selected installation area (3 through 7). Smooth out all creases and wrinkles. If the ground cloth has any tears or cuts, it can still be used if the damaged areas can be laid out such that they are held together by the weight of the tank.

7. Tank is now located in center of opened ground cloth (7).

CAUTION

Do not walk on outside or inside of tank or cover, damage and/or contamination may occur.

Assembly

1. Unfold the tank and unfold the sides (9 through 12).

2. Perform the before preventive maintenance checks and services (PMCS) WP 0009 00.

3. In the installation area (13), fully spread out the tank, open end up, on the pre-positioned ground cloth.

INITIAL ADJUSTMENTS AND ROUTINE CHECKS

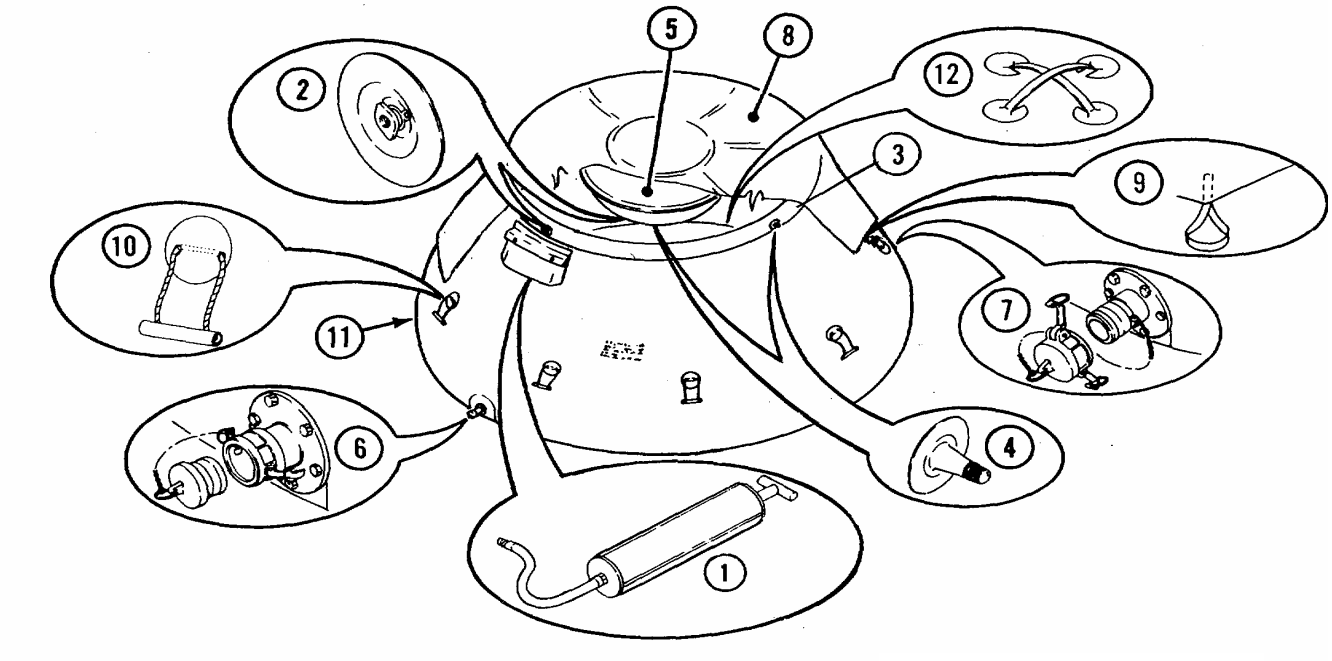
NOTE

If the tank is cut or punctured during any phase of operation, refer to WP 0006 00 for emergency repair procedures.

1. Remove hand pump (1) and hose from repair pouch and connect hose to hand pump. For Model 91038, remove the foot bellows and hose from the repair pouch. Connect hose to foot bellow.

2. Thread the hand pump or foot bellows hose into the inflation valve (2) in the tank collar (3).

3. Open the inflation valve (2) by turning the center part of the valve clockwise, as stenciled on the collar (3).



NOTE: Model 90074 shown.
Others similar

NOTE: Models 91038 and WT2008
foot bellows not shown.

CAUTION

Do not over-inflate the tank collar. Maximum air pressure is 0.5 psi (3.4 kPa). Tank collar may be damaged if over-inflated.

CAUTION

The tank collar may also be inflated by attaching a standard automotive pump to the automotive valve but is not recommended as damage may occur to collar.

4. Operate the hand pump or foot bellows to inflate the collar (3) until firm.

NOTE
A firm touch approximates 0.5 psi (3.4 kPa).

5. Close the inflation valve (2) by turning the center part of the valve counterclockwise (to the left), as stenciled on the collar (3).

6. Unthread the hand pump or foot bellows hose from the inflation valve (2) on the collar (3) and thread into the inflation valve (2) in the cover float (5). Insure float is securely attached to cover.

7. Open the inflation valve (2) on the cover float by turning the center part of the valve clockwise (to the right), as stenciled on the cover float (5).

CAUTION

Do not over-inflate the cover float. Maximum air pressure is 0.5 psi (3.4 kPa). Cover float may be damaged if over-inflated.

CAUTION

The float may also be inflated by attaching a standard automotive pump to the automotive valve, but it is not recommended as damage may occur to float.

8. Operate the hand pump or foot bellow to inflate the cover float (5) until firm.

NOTE

A firm touch approximates 0.5 psi (3.4 kPa).

9. Close the inflation valve (2) on the cover float (5) by turning the center part of the valve counterclockwise, as stenciled on the cover float.

10. Unthread the hand pump/foot bellows hose (1) from the inflation valve (2), disconnect hose from the hand pump or foot bellows. Store items in the repair pouch.

INITIAL ADJUSTMENTS AND ROUTINE CHECKS (Model GTA-Z60TPW Only)

NOTE

If the tank is cut or punctured during any phase of operation, refer to WP 0006 00 for emergency repair procedures.

1. Pull tank from perimeter so there are no wrinkles on the bottom of the tank.

2. To avoid damaging tank, kneel down on tank to remove top cover by unsealing from tank.

3. Unseal top opening of tank and look inside tank to check that it is clean and there are no foreign objects inside.

4. Reseal top tank opening. Make sure seal is smooth with no wrinkles.

5. Replace cover over sealed tank opening. Attach cover to tank, making sure there are no wrinkles.

6. Remove protective wrapping from fittings (6) and (7) and save for repacking after use.

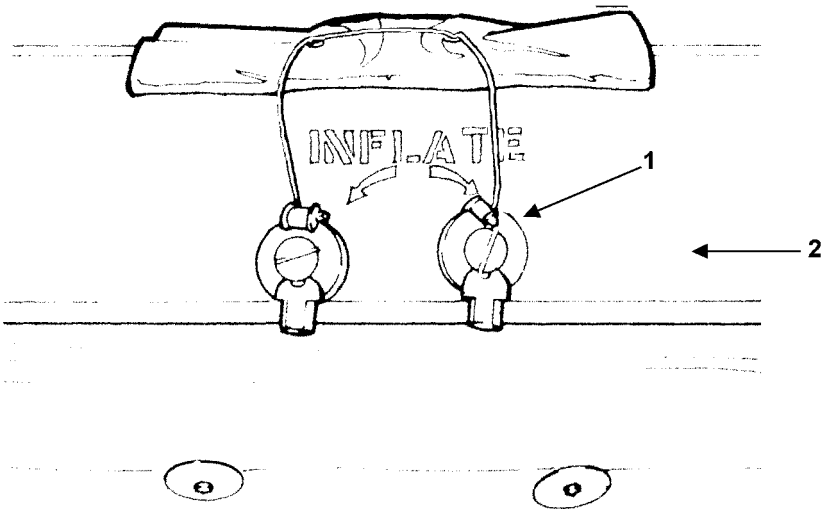
INITIAL ADJUSTMENTS AND ROUTINE CHECKS (Model WT2008 Only)

NOTE

If the tank is cut or punctured during any phase of operation, refer to WP 0006 00 for emergency repair procedures.

1. Remove the foot bellows and hose from repair pouch. Connect hose to foot bellow.

2. Remove plugs from the two non-return valves (1). Insert foot bellows tube into valve inlet.



CAUTION

Do not over-inflate the tank collar. Maximum air pressure is 0.5 psi (3.4 kPa). Tank collar may be damaged if over-inflated.

CAUTION

The tank collar may also be inflated by attaching a standard automotive pump to the automotive valve (located on the other side of the tank) but is not recommended as damage may occur to collar.

3. Operate the foot bellows to inflate the collar (2) until firm.

4. Remove the bellows tube and replace the inflation valve plugs (1).

NOTE

A firm touch approximates 0.5 psi (3.4 kPa).

5. Remove the inflation valve plug (1) on the cover float. Insert foot bellows hose into float inflation valve.

CAUTION

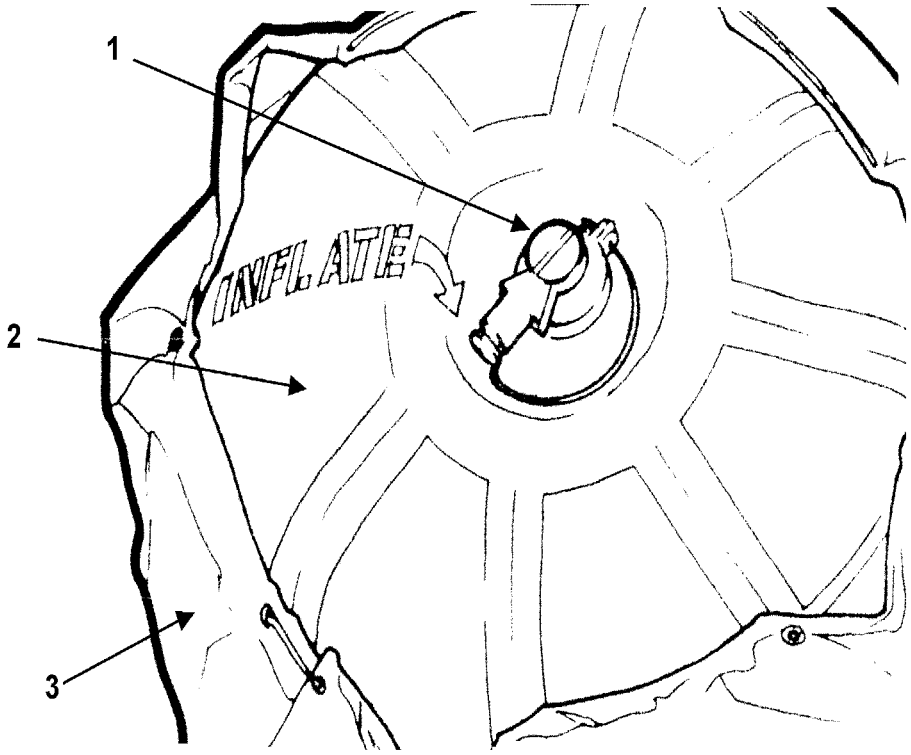
Do not over-inflate the cover float. Maximum air pressure is 0.5 psi (3.4 kPa). Cover float may be damaged if over-inflated.

6. Operate the foot bellow to inflate the cover float (2) until firm.

NOTE

A firm touch approximates 0.5 psi (3.4 kPa).

7. Remove foot bellow hose and replace float inflation valve plug.



8. With float inflated, fit into the netting holder (3), with the inflation valve uppermost and secure in position with the drawstring on the holder.

9. Store foot bellows in the repair pouch.

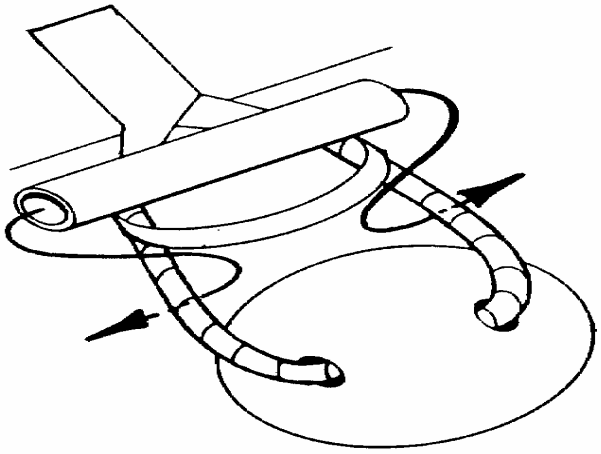
OPERATING PROCEDURES (Filling the Tank)

NOTE

The number and type of fastening devices to attach the cover to the tank may vary between tank models.

1. Place cover (8) over top of tank (11), ensuring that cover float (5) is positioned inside tank first, and align the ten cover handles (9) around the edge of the cover (8), with the ten handle-toggles (10) around the tank.

2. Loop die cover handles (9) over the handle-toggles (10). Pull the handle-toggles (10) down over the cover handles (9) and tuck the ends under the rope, to secure the cover into position.



Models 90074/91038/
GTA-Z60TPW only

NOTE

There are two fill/discharge fittings which provide a 2-inch (50.8 mm) coupling located at opposite ends of the tank. One end provides a female cam-lock coupling; the other end provides a male cam-lock coupling. Either, or both, may be used for filling the tank.

3. Remove the dust plug from the female cam-lock coupling (6) or the dust cap from male cam-lock coupling (7) by pulling out on cam-lever arms.

4. Depending on system setup connect water fill/discharge lines to the fittings; secure by pushing cam-lever arms in against hose, or fill tank through top opening.

NOTE

Do not exceed capacity of tank. If metering gauge is not available, tank is full when water level reaches lower edge of the tank collar.

5. Begin filling the tank. A maximum of 3,000 gallons (11,356 liters) may be put into the tank.

6. Turn off flow of water when tank is full.

7. Disconnect supply line from the tank, and stop the flow of water by installing the dust plug in the female cam-lock couplings (6) or the dust cap on the male cam-lock coupling (7).

OPERATING PROCEDURES (Filling the Tank) MODELS GTA-Z60TPW and 3-K-W-O-A/Z

NOTE

There are two fill/discharge fittings which provide a 2-inch (50.8 mm) coupling located at opposite ends of the tank. One end provides a female cam-lock coupling; the other end provides a male cam-lock coupling. Either, or both, may be used for filling the tank.

1. Remove the dust plug from the female cam-lock coupling (6) or the dust cap from male cam-lock coupling (7) by pulling out on cam-lever arms.

2. Depending on system setup, connect 2” ball valve assembly to the fittings; secure by pushing cam-lever arms in against hose.

3. Attach hose to 2” ball valve assembly. Open ball valve assembly.

4. Begin filling the tank. A maximum of 3,000 gallons (11,356 liters) may be stored in the tank. GTA-Z60TPW tank is full when height of 45” is reached. Model 3-K-W-O-A/Z tank is full when 56” height is reached.

NOTE

Do not exceed capacity of tank. If metering gauge is not available, tank is full when water level reaches lower edge of the tank top seam.

5. When tank is full, turn off flow of water from supply line.

6. Close ball valve.

7. Disconnect supply line from the tank ball valve assembly.

8. Install the dust plug or the dust cap on the ball valve assembly.

OPERATING INSTRUCTIONS ON DECALS AND INSTRUCTION PLATES

No decals or instruction plates are provided on the collapsible fabric water tank. The different stencils are provided with the locations on Models 90074, 91038 and 3-K-W-O-A/Z as follows. Others are similar.

a. Carry Stencil (1).

4 SOLDIER CARRY

b. Automotive Valve Stencil (2).

INFLATION
MAX 1/2 P.S.I.G.

c. Inflation Valve Stencil (3).

MAX 1/2 P.S.I.G.
INFLATION

OPEN

CLOSE

DEFLATION

d. Identification Stencil (4).

TANK, FABRIC, SELF-SUPPORTING
3000 U.S. GALLON WATER
NSN. 5430-01-359-4774
SERIAL NO.: AMFUEL PN 90074
MFR. AMFUEL, MONTICELLO, ARK.
WEIGHT EMPTY. 135 LBS.
CONTRACT NO. DAAK01-92-D-0056
LOT. NO.:
DATE OF MANUFACTURE:
FIVE YEAR USE LIFE-EXTENDABLE
TEN YEAR STORAGE LIFE-EXTENDABLE

e. Repair Pouch (5).

REPAIR KITS

f. Fill/Discharge Hose Stencil (6).

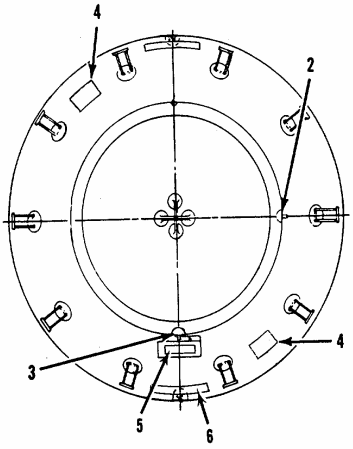
CONNECT FILL/DISCHARGE HOSE HERE

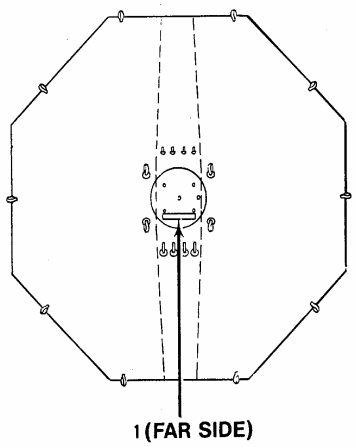
g. Identification Stencil (4) Model 91038.

TANK, FABRIC, SELF-SUPPORTING
3000 U.S. GALLON WATER
NSN. 5430-01-318-9434
SERIAL NO. AMFUEL PN 91038
MFR. AMFUEL, MAGNOLIA, ARK.
WEIGHT EMPTY LBS.
CONTRACT NO.
LOT NO.
MFG. DA

h. Identification Stencil (4) Model 3-K-W-O-A/Z

TANK, FABRIC, SELF-SUPPORTING
3000 U.S. GALLONS WATER
NSN: 5430-01-470-7380
SERIAL NO.: (SPECIFY)
MFR: RELIANCE COATED FABRICS
WEIGHT EMPTY: 90 LBS.
CONTRACT NO. DAAE07-99-D-T045
LOT NO:SPECIFY





OPERATION OF AUXILIARY EQUIPMENT

No auxiliary equipment is provided with the collapsible fabric water tank assembly.

PREPARATION FOR MOVEMENT

Draining and Drying (Models 90074, 91038 and WT2008)

1. Drain all water from the tank.

2. Disconnect fill/discharge lines from tank fittings.

NOTE

The number and type of fastening devices to attach a cover to a tank may vary between tank models.

3. Disconnect the ten cover handles (9) around the edge of the cover (8) from the ten handle-toggles (10) around the tank (11).

4. Remove the cover (8).

CAUTION

When tank is being prepared for storage or transportation, make sure that the inflation valves remain open. The tank collar and cover float may be damaged if the valves are closed and the tank encounters different atmospheric pressures.

5. Deflate the cover float (5) by turning the center part of the inflation valve clockwise to open for Models 91038 and 90074. Do not close the inflation valve after float is deflated. For WT2008, deflate float and remove float from drawstring holder for storage in valise.

6. Deflate the tank collar (3) by turning the center part of the inflation valve clockwise (to the right) to open for Models 91038 and 90074. For WT2008, deflate tank collar, unscrew deflation valve located on the top surface of the collar, then roll the tank up to expel the air. Do not close the inflation valve after collar is deflated.

7. Clean the outside of the tank (11) and the cover (8) with a mild detergent (Item 4, WP 0030 00) and water solution. Rinse thoroughly with clean water.

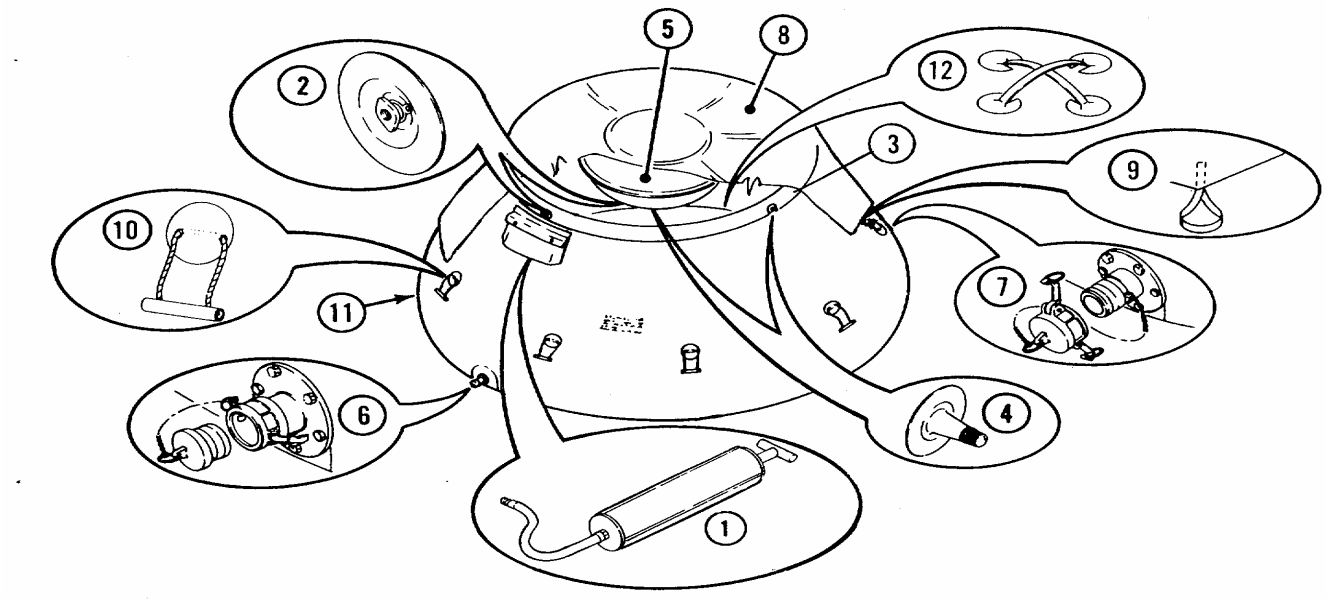
8. Allow the cover (8) and the outside of the tank (11) to dry thoroughly.

CAUTION

Do not lift or move the inside lift handles if there is any standing water. Do not lift or move the tank with the inside lift handles if there is any standing water remaining in the bottom of the tank. Damage to the handles and/or tank fabric may occur.

9. Using the inside lift handles (12), suspend the tank (11) inside out. On WT2008, there is a single loop at the center of the floor on the inside of the tank for hanging out to dry out.

10. If needed, clean the inside of the tank with a mild detergent (Item 4, WP 0030 00) and water solution. Rinse thoroughly with clean water.



NOTE: Model 90074 shown, Other's similar.

NOTE: Foot bellow, Models 91038 and WT2008 not shown.

11. Keep the tank suspended until thoroughly dry.

12. Shake out ground cloth to remove loose dirt and debris. If needed, spot clean ground cloth with a mild detergent (Item 4, WP 0030 00) and water solution, and rinse with clean water. Allow ground cloth to dry thoroughly.

13. Take down the tank; position it with the handle-toggles (10) to the outside.

Draining and Drying (Models GTA-Z60TPW and 3-K-W-O-A/Z)

1. Drain all water from the tank.

2. Disconnect fill/discharge hose lines from ball valve assembly.

3. Disconnect ball valve assembly from tank fittings (6) and/or (7).

4. Clean the outside of the tank and cover (8) with a mild detergent and water solution and rinse thoroughly with clean water.

5. Allow the exterior of the tank to dry thoroughly.

6. On Model GTA-Z60TPW, remove cover and unseal top opening on top of tank. On Model 3-K-W-O-A/Z, unzip top opening on tank.

CAUTION

Do not lift or move the inside lift handle if standing water is present. Do not lift or move the tank by the inside lift handle if any standing water is present in the bottom of the tank. Damage to the handle and/or tank fabric may occur.

7. Using the inside lift handle (12), suspend the tank inside out. On Model 3-K-W-O-A/Z, there are two lift handles (12).

8. If needed, clean the inside of the tank with a mild detergent and water solution and rinse thoroughly with clean water.

9. Turn tank inside out and suspend (using inside handle) until thoroughly dry.

10. Shake out ground cloth to remove loose dirt and debris. If needed, spot clean ground cloth with a mild detergent and water solution, and rinse with clean water. Allow ground cloth to dry thoroughly.

11. Take down the tank. Turn tank right side out so stencils are outside.

12. Quick connect the dust cap and dust plug to filler/discharge fittings and wrap fittings with cushioning material.

Folding – Models 91038, 90074 and 3-K-W-O-A/Z

CAUTION

Make sure the tank is completely dry before folding. Water will create mildew, decreasing the life of the tank if it is not completely dry.

NOTE

- Ensure fill/discharge fittings are positioned at the ends of the tank.
- Throughout the folding process, be sure to brush off any stones, grass, or other debris that may accumulate on the tank or the ground cloth.
- Two personnel are required when folding and rolling up the tank and the ground cloth to ensure that a tight bundle results.

1. Lay the tank out flat on the ground, with the tank collar up (1).

2. Grasp one side of the tank (2) (without a fill/discharge fitting), and fold inward toward the center (3).

3. Grasp the opposite side of the tank (3) and fold inward, over the first fold (4).

4. Fold any over-hang of the second fold back on top of itself (4).

5. Starting at one end of the tank (5), tightly roll up the tank (6).

6. Lay the cover out flat, float side up (7).

CAUTION

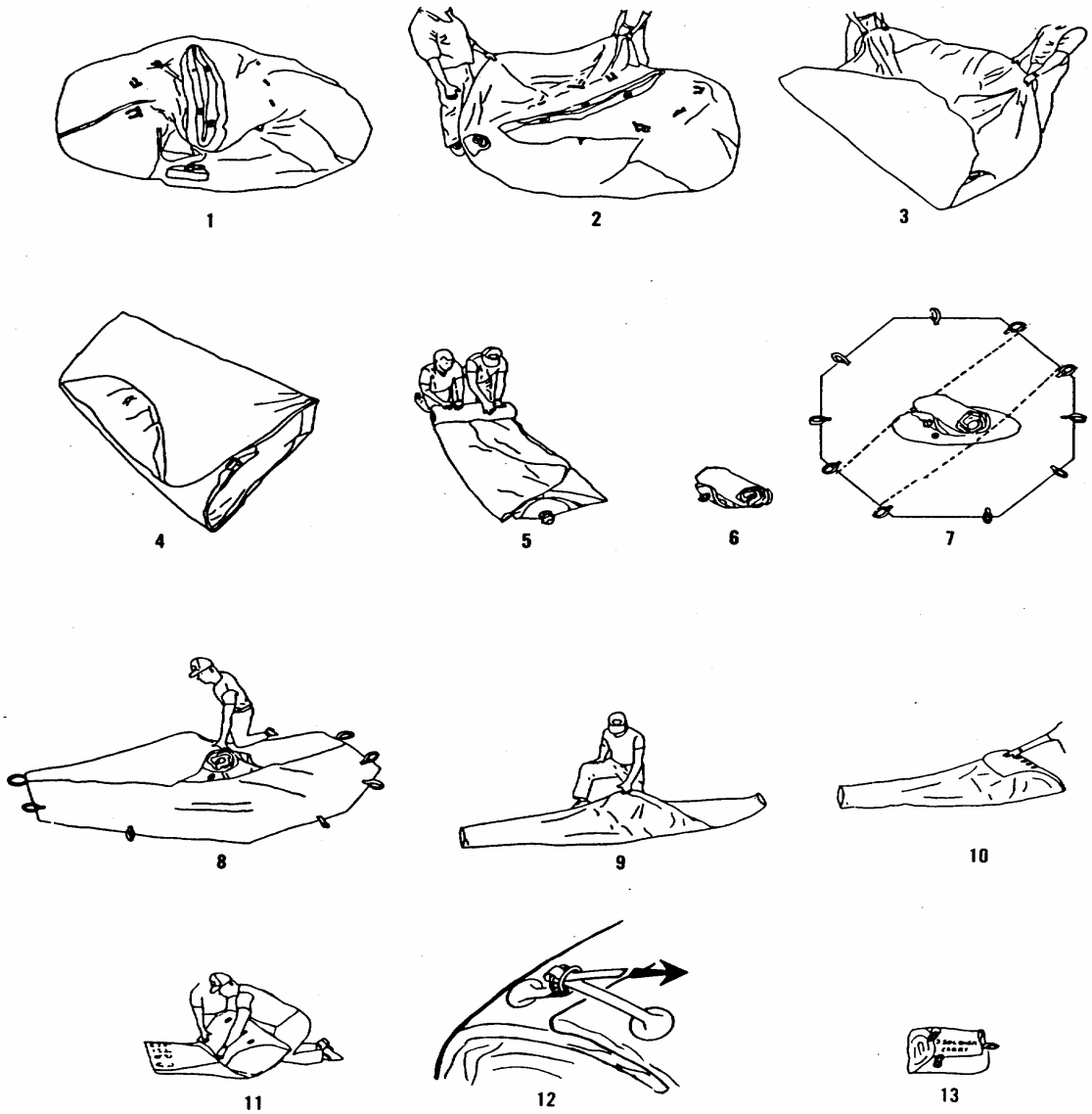
Do not walk on tank or cover, as damage may occur.

NOTE

If the fold lines have worn off, the length of the tank should run parallel to the ends of the cover which have two handles each.

7. Lay the rolled up tank on the cover, with its length perpendicular to the two fold lines (7).

8. Fold one side of the cover, along the fold line, in over the tank (8).



9. Fold the other side of the cover, along the fold line, in over the first fold (9).

10. Fold the end of the cover with the D-rings (12) up over the tank (10).

11. Fold the other end of the cover in so that the straps are brought to the underside edge of the fold (11).

12. Grasp the enclosed tank and tightly roll the bundle over onto the protruding end of the cover (11).

13. Pull the straps under the D-rings (12), bring back over the first D-ring, under the second D-ring, and pull snug to secure the bundle (13).

14. Resulting bundle should be tightly packed with the four carrying handles (Model 91038, three carrying handles) up (13).

15. Place bundle into shipping container.

16. For Model 90074, fold the dry ground cloth to the same size as the tank. Place the ground cloth into the shipping container.

Folding – GTA-Z60TPW

CAUTION

Make sure tank is completely dry before folding. Water will create mildew, decreasing the life of the tank if it is not completely dry.

NOTE

- Ensure fill/discharge fittings are positioned at the perimeter of the tank.
- Throughout the folding process, be sure to brush off any stones, grass, or other debris that may accumulate on the tank or the ground cloth.
- Two personnel are required when folding and rolling up the tank and ground cloth to ensure that a tight bundle results.

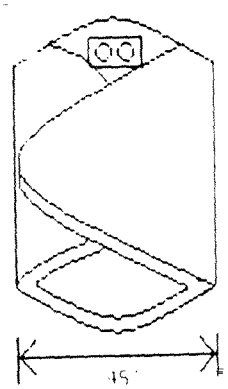
1. Lay the tank out flat on the ground with the tank opening up.
2. Grasp one side of the tank (2) and fold inward toward the center (3).
3. Grasp opposite side of the tank and fold inward other the first fold (4).
4. Fold any overhang of the second fold back on top of itself (4).
5. Starting at one end of the tank (5), tightly fold up the tank (6).
6. Lay the ground cloth/valise out flat on the ground (7).

CAUTION

Do not walk on the ground cloth. Damage may occur.

7. Place the rolled tank in the center of the ground cloth (7).
8. Fold one side of the ground cloth in over the tank (8).
9. Fold the other side of the ground cloth in over the first fold (9)
10. Starting at one end (10), fold the ground cloth up in a tight bundle with the tank bundle inside (11).
11. Lift bundle and position carrying straps underneath.
12. Secure straps around the bundle using loops to tie (12).
13. Place tank bundle into shipping container.

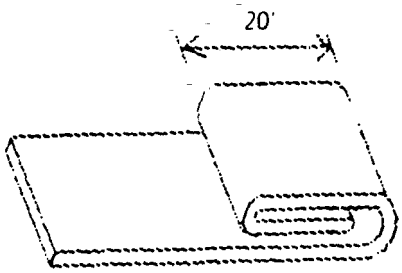
Folding – WT2008

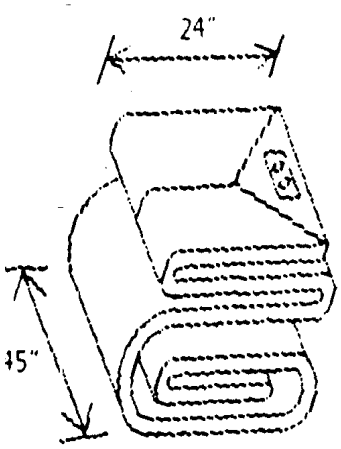


1. Lay tank out as flat as possible and completely deflate ring.

2. Fold sides in as shown, take care deflation plugs are not fouled.

3. Fold tank twice towards inflation valves.





4. Turn tank over. Complete folding tank as shown to dimensions indicated.

5. Store tank, cover, cover float, foot bellows and repair kit in valise.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
OPERATION UNDER UNUSUAL CONDITIONS

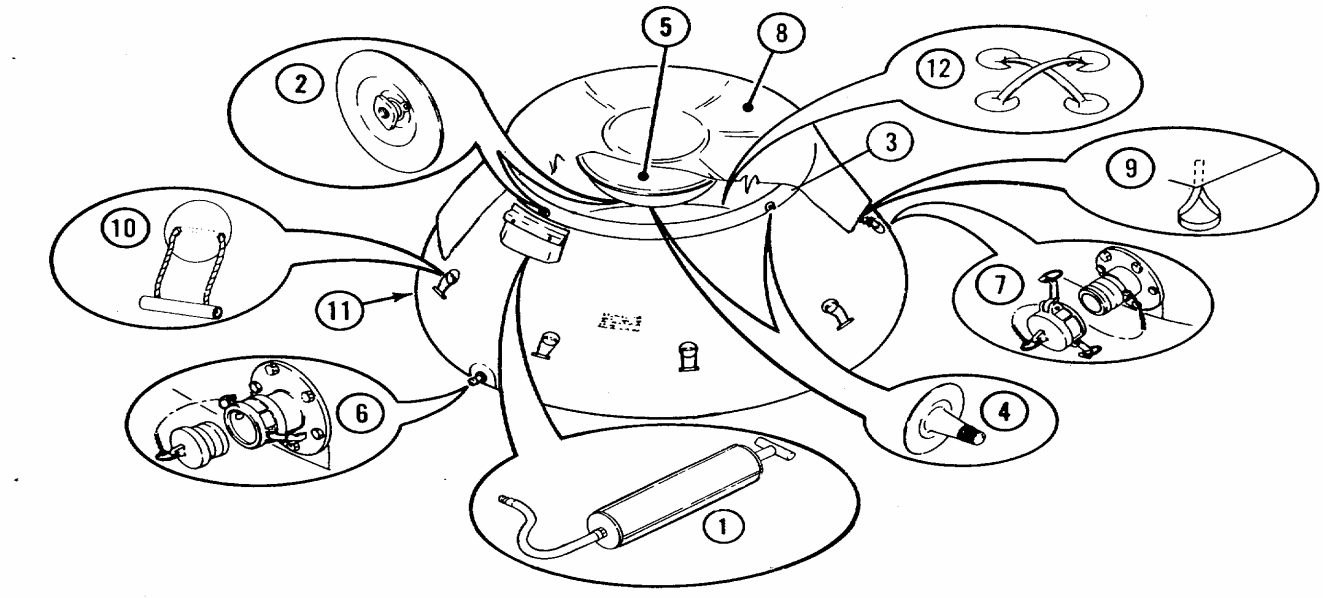
OPERATION IN EXTREME HEAT.

1. Ensure that cover (8) is properly installed or on Model 3-K-W-O-A/Z, top opening is zipped up, to decrease water evaporation from the tank.

2. Ensure that tank collar (3) and cover float (5) do not become over-inflated (Models 90074/91038/WT2008).

3. If possible, set up protective shade over the tank.

NOTE
Avoid any unnecessary handling of the tank.



NOTE: Model 90074 shown, others similar.
Foot bellow, Models 91038 & WT2008 not shown.

OPERATION IN EXTREME COLD.

CAUTION

If the tank is used in temperatures below freezing [32°F (0°C)], caution must be used to prevent water in the tank, or in contact with the fluid discharge fittings from freezing. If water freezes, damage may occur to the tank and/or fittings.

NOTE
Avoid any unnecessary handling of the tank.

1. Do not allow ice to accumulate on the tank, ball valve assemblies (Models GTA-Z60TPW and 3-K-W-O-A/Z) or the fill/discharge fittings (6 and 7).

2. Ensure that tank collar (3) and cover float (5) do not become under-inflated.

OPERATION IN SALT WATER AREAS.

1. Keep cover (8) properly installed to keep salt water from contaminating drinking water.

2. Keep tank opening sealed (Model GTA-Z60TPW) or zipped closed (Model 3-K-W-O-A/Z).

3. Clean fill and discharge fittings (6 and 7) with clean water prior to filling or drawing water from the tank.

OPERATION IN SANDY OR DUSTY AREAS.

1. Keep top opening sealed (Model GTA-Z60TPW) and cover (8) properly installed to prevent sand or dust from contaminating drinking water. Keep top opening zipped closed (Model 3-K-W-O-A/Z).

2. Ensure that fill and discharge fittings (6 and 7) are free of sand or dirt prior to filling or drawing water from the tank.

OPERATION AT HIGH ALTITUDES.

No special procedures are required for operation at high altitudes.

OPERATION IN SNOW AND ICE.

1. Keep cover (8) properly installed to prevent snow from contaminating water supply.

2. Sweep snow from exterior of tank with a soft-bristled broom or brush.

3. Do not allow ice to accumulate on the tank, ball valve assemblies (Models GTA-Z60TPW and 3-K-W-O-A/Z) or the fluid discharge fittings (6 and 7).

4. Cover fittings or ball valve assemblies (Models GTA-Z60TPW and 3-K-W-O-A/Z) to keep ice from forming on fluid discharge fittings (6 and 7) or ball valve assemblies.

OPERATION IN MUD.

Ensure that fluid discharge fittings (6 and 7) and ball valve assemblies (Models GTA-Z60TPW and 3-K-W-O-A/Z) are clean before filling or drawing water from the tank.

OPERATION IN HIGH WINDS.

1. Ensure that cover (8) remains properly attached to tank.

2. Keep tank as full of drinking water as possible.

OPERATION IN RAIN.

1. Keep cover (8) installed to prevent rain from contaminating water supply.

2. Keep top opening zipped closed (Model 3-K-W-O-A/Z) to prevent rain from contaminating water supply.

3. If possible, provide adequate drainage ditches to prevent standing water around tank.

EMERGENCY PROCEDURES.

General.

Emergency repair is performed when cuts or punctures occur in the tank when it is in use.

The Emergency Repair Kit is stored in the repair pouch on the outside wall of the tank.

Emergency Repairs With Wood Plugs.

In emergencies, as an immediate temporary measure, the wood plugs may be used for sealing small holes or punctures.

The size of hole or tear will determine the size of wood plug to be used.

1. For holes (tears) up to approximately 0.5 inch (1.27 cm) in size, use the 3-inch (7.62 cm) long plug.

2. For holes (tears) up to approximately 1.5 inch (3.81 cm) in size, use the 5-inch (12.7 cm) long plug.

Select the size plug needed to fit (seal) the tank puncture, wet and insert in the hole. Twist plug clockwise (to the right) until the leak is either stopped or slowed. Follow-up regular inspection should be made of the wood plugs, as possible tightening may be necessary if the leaks resume. Later, if a leak is not totally stopped, the use of a small sealing clamp may become necessary.

Emergency Repairs With Sealing Clamps.

Small slits, tears, or cuts [not to exceed 6 inches (15.24 cm) in length] may be repaired with sealing clamps.

The size of the damaged area (opening) needing repair will govern the size of the clamp needed. Select clamp size as follows:

1. For holes (tears) less than 2 inches (5.08 cm) in length, use the 3-inch (7.6 cm) clamp.

2. For holes (tears) 2 to 4 inches (5.08 to 10.16 cm) in length, use the 5-inch (12.7 cm) clamp.

3. For holes (tears) 4 to 6 inches (10.16 to 15.24 cm) in length, use the 7-1/2-inch (19 cm) clamp.

NOTE

It may be necessary to increase the size of the tears in order to be able to insert the bottom plate of the clamp.

4. Loop cord around wrist (1) to prevent loss of clamp into tank.

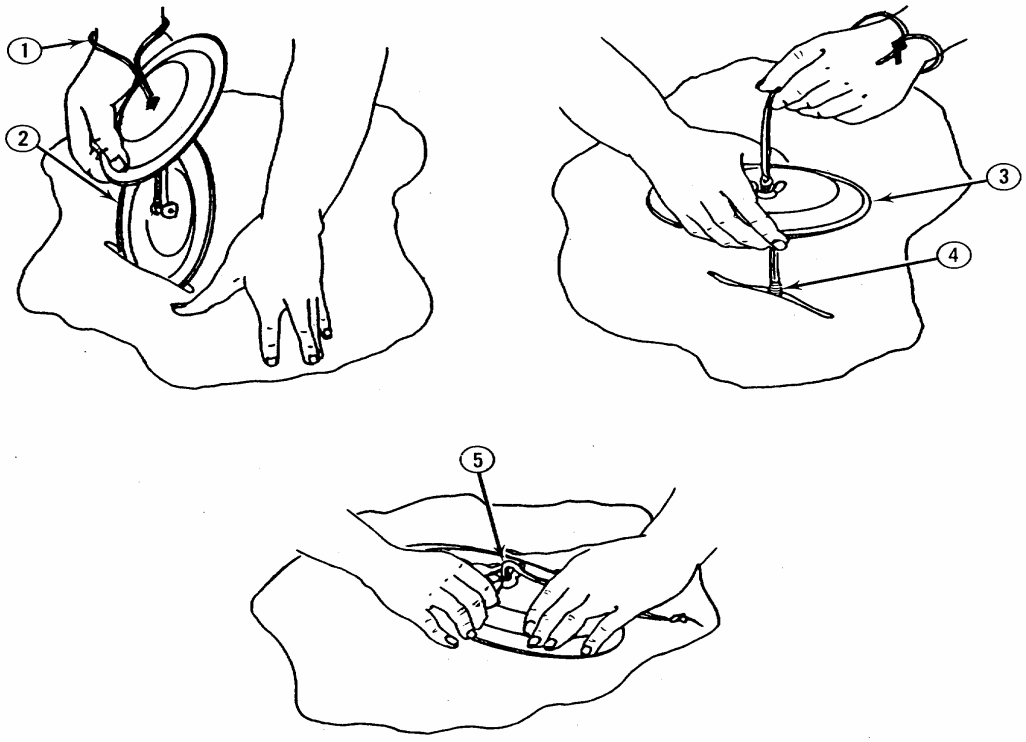
5. Slip the bottom plate of the clamp (2) through the hole or tear and rotate it until it is centered and its length runs with the tear.

6. Pull bottom plate up against fabric, and slide top plate and wing nut (3) down cord and onto threaded stud (4) of bottom plate.

CAUTION

Do not over tighten, as stud threads may be stripped, or damage to tank fabric may occur.

7. With plates aligned, tighten wing nut (5) to clamp the tank wall between the two plates. Tighten enough to stop leak.



INTERIM NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DECONTAMINATION PROCEDURES.

NOTE

Detailed decontamination procedures can be found in: FM 3-3, FM 3-4, and FM 3-5.

General.

The following emergency procedures can be performed until field NBC decontamination facilities are available.

Emergency Procedures.

If NBC attack is known or suspected, mask at once and continue mission. Do not unmask until told to do so.

1. Nuclear decontamination - Brush fallout from skin, clothing, and equipment with available brushes, rags, and tree branches. Wash skin and have radiation check made as soon as tactical situation permits.

2. Biological decontamination - Remain masked and continue mission until told to unmask.

3. Chemical detection and decontamination.

WARNING

Do not use decontamination spray on personnel. It could cause personal injury.

a. Use M8 paper from the M256 chemical agent detector kit or M9 paper to determine if liquid agent is present on the surface of the equipment.

b. If exposure to liquid agent is known or suspected, clean exposed skin, clothing, and personal gear, in that order, using M258A1 kit. Use the buddy system. Wash exposed skin and thoroughly decontaminate as soon as tactical situation permits.

c. If the M8 or M9 paper indicates that liquid chemical agent is present, rinse the exposed portion of the collapsible tank with a liberal amount of water. When the tactical situation permits, wash the collapsible tank with soapy water and rinse.

d, Decontamination procedures take time. Do as much as you can based on the tactical situation.

END OF WORK PACKAGE

CHAPTER 3

OPERATOR TROUBLESHOOTING
FOR
TANK, WATER STORAGE, 3000 GALLONS

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
TROUBLESHOOTING PROCEDURES

INTRODUCTION TO TROUBLESHOOTING.

The Troubleshooting Malfunctions list the common malfunctions which you may find during the operation or maintenance of the collapsible fabric water tank assembly or its components. Perform the tests/inspections and corrective actions in the order listed in the table.

This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

TROUBLESHOOTING PROCEDURE

TANK COLLAR (Models 90074/91038/WT2008)

SYMPTOM

Tank collar will not inflate.

MALFUNCTION

Check that inflation valve (2) on tank collar (3) is open.

CORRECTIVE ACTION

Open inflation valve by turning the center part of the inflation valve (2) clockwise (to the right), as stenciled on the tank collar (3).

Model WT2008: Check that deflation valve is fully closed.

CORRECTIVE ACTION

Close deflation valve.

Check that automotive valve (1) is not damaged.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check hand pump assembly (9) for damage.

CORRECTIVE ACTION

Replace preformed packing (Item 2, WP 0033 00).

Check foot bellows on Models 91038 and WT2008 for damage.

CORRECTIVE ACTION

Replace foot bellows if required.

Check inflation valve (2) for damage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check tank collar (3) for tears or punctures.

CORRECTIVE ACTION

Notify unit maintenance for repair.

SYMPTOM

Tank collar deflates after inflation.

NOTE

If temperature has dropped considerably since the collar was inflated, it will appear to have lost air. Unless it is observed to lose additional air, the collar is in operating condition and does not have a leak. Do not inflate unless a leak is observed.

MALFUNCTION

Check that inflation valve (2) was fully closed after tank collar (3) was inflated.

CORRECTIVE ACTION

If inflation valve (2) was not fully closed, reinflate the tank collar (3) to proper psi of approximately 0.5 psi (3.4 kPa), making sure to properly close valve after inflation by turning counterclockwise (to the left).

Model WT2008: Check that deflation valve is fully closed.

CORRECTIVE ACTION

Close deflation valve.

Check inflation valves (2) for air leakage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Model WT2008: Check deflation valve for leaks.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check automotive valve (1) for air leakage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check tank collar (3) for cuts or punctures.

CORRECTIVE ACTION

Notify unit maintenance for repair.

SYMPTOM

Tank collar will not deflate.

MALFUNCTION

Check that inflation valve (2) is open.

CORRECTIVE ACTION

Open inflation valve (2) by turning center part of the valve clockwise (to the right), as stenciled on tank collar (3).

Model WT2008: Check deflation valve is fully open.

CORRECTIVE ACTION

Unscrew deflation valve.

Check inflation valve (2) for damage. Model WT2008, check deflation valve for damage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

TROUBLESHOOTING PROCEDURE

COVER FLOAT (Models 90074/91038/WT2008)

SYMPTOM

Cover float will not inflate.

MALFUNCTION

Check that inflation valve (4) is open.

CORRECTIVE ACTION

Open inflation valve (4) by turning the center part of the valve clockwise (to the right), as stenciled on the cover float (5).

Check hand pump (9) for proper operation.

CORRECTIVE ACTION

Replace preformed packing (Item 2, WP 0033 00).

Models 91038 and WT2008, check foot bellows for damage.

CORRECTIVE ACTION

Replace foot bellow if required.

Check inflation valve (4) for damage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check automotive valve (4A) for damage on Models 91038, 90074 and WT2008.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check cover float (5) for cuts or punctures.

CORRECTIVE ACTION

Notify unit maintenance for repair.

SYMPTOM

Cover float deflates after inflation.

MALFUNCTION

NOTE

If temperature has dropped considerably since the float was inflated, it will appear to have lost air. Unless it is observed to lose additional air, the float is in operating condition and does not have a leak. Do not inflate unless a leak is observed.

Check that inflation valve (4) was fully closed after cover float (5) was inflated.

CORRECTIVE ACTION

If inflation valve (4) was not fully closed, reinflate the cover float (5) to proper psi of approximately 0.5 psi (3.4 kPa), making sure to properly close valve after inflation.

Check inflation valve (4) for air leakage.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check automotive valve (4A) for air leakage on Models 91038, 90074 and WT2008.

CORRECTIVE ACTION

Notify unit maintenance for repair.

Check cover float (5) for cuts or punctures.

CORRECTIVE ACTION

Notify unit maintenance for repair.

SYMPTOM

Cover float will not deflate.

MALFUNCTION

Check that inflation valve (4) is open.

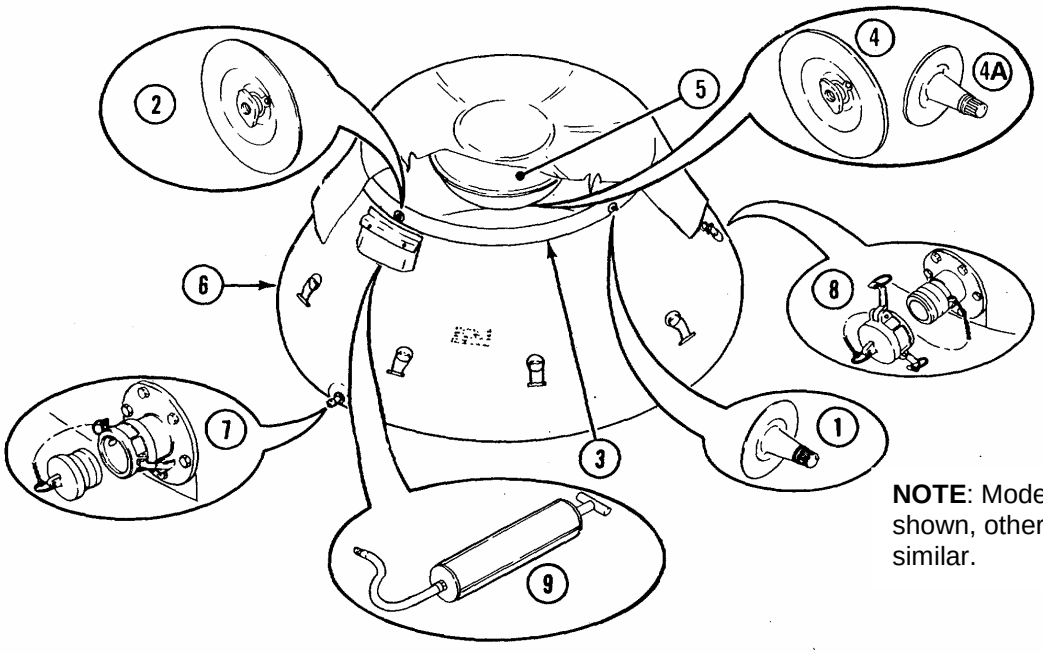
CORRECTIVE ACTION

Open inflation valve (4) by turning center part of the valve clockwise (to the right), as stenciled on cover float (5) for Models 91038 and 90074. On Model WT2008, open inflation valve.

Check inflation valve (4) for damage.

CORRECTIVE ACTION

Notify unit maintenance for repair.



NOTE: Model 90074 shown, others similar.

TROUBLESHOOTING PROCEDURE

TANK

SYMPTOM

Tank leaks.

MALFUNCTION

Check tank (6) for cuts or punctures.

CORRECTIVE ACTION

Perform emergency repairs (WP 0006 00).

TROUBLESHOOTING PROCEDURE

FILL/DISCHARGE FITTINGS

SYMPTOM

Fill/discharge fittings leak.

MALFUNCTION

Check fill/discharge fittings (7 and 8) for loose, damaged, or missing bolts.

CORRECTIVE ACTION

Tighten as necessary or notify Unit maintenance for repair.

Make sure dust plug/cap are securely installed on fill/discharge fittings (7 and 8) and that cam-lever arms are secured.

CORRECTIVE ACTION

Properly install dust plug/cap, if required.

NOTE

Water should be drained from tank before attempting to inspect or replace a gasket.

Check gasket, installed in both fill/discharge fittings (7 and 8) for damage (WP 0021 00 and WP 0022 00 respectively).

CORRECTIVE ACTION

Replace gasket (Item 1, WP 0033 00).

END WORK PACKAGE

CHAPTER 4

UNIT TROUBLESHOOTING
FOR
TANK, WATER STORAGE, 3000 GALLONS

UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
TROUBLESHOOTING PROCEDURES

INTRODUCTION TO TROUBLESHOOTING

There are no troubleshooting procedures at Unit level.

END OF WORK PACKAGE

CHAPTER 5

OPERATOR MAINTENANCE INSTRUCTIONS FOR TANK, WATER STORAGE, 3000 GALLONS

OPERATOR MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
PMCS PROCEDURES INTRODUCTION

INTRODUCTION

General

Preventive Maintenance Checks and Services (PMCS) are performed to keep the collapsible fabric water tank assembly in operating condition. The checks are used to find, correct or report problems. Be sure to perform your PMCS each time you service the tank assembly. Using the PMCS table, always do PMCS in the same order, so it gets to be a habit. With practice, you'll quickly spot anything wrong. Pay attention to WARNING and CAUTION statements. A WARNING means someone could be hurt. A CAUTION means equipment could be damaged.

Before you use the tank assembly, do Before PMCS.

During use, do During PMCS.

After the tank assembly is used, do After PMCS.

Do weekly PMCS once a week.

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

Use DA Form 2404 (Equipment Inspection and Maintenance Worksheet) to record any faults that you discover before, during, or after operation, unless you can fix them. You DO NOT need to record faults that you fix. Marine Corps users refer to TM 4700-15/1 for equipment records procedures. For further information on how to use this form, see DA PAM 738-750.

If tools required to perform PMCS are not listed in WP 0026 00, notify unit maintenance.

PMCS Procedures

Your Preventive Maintenance Checks and Services, Table 1, lists the inspections and care required to keep the water tank assembly in good operating order.

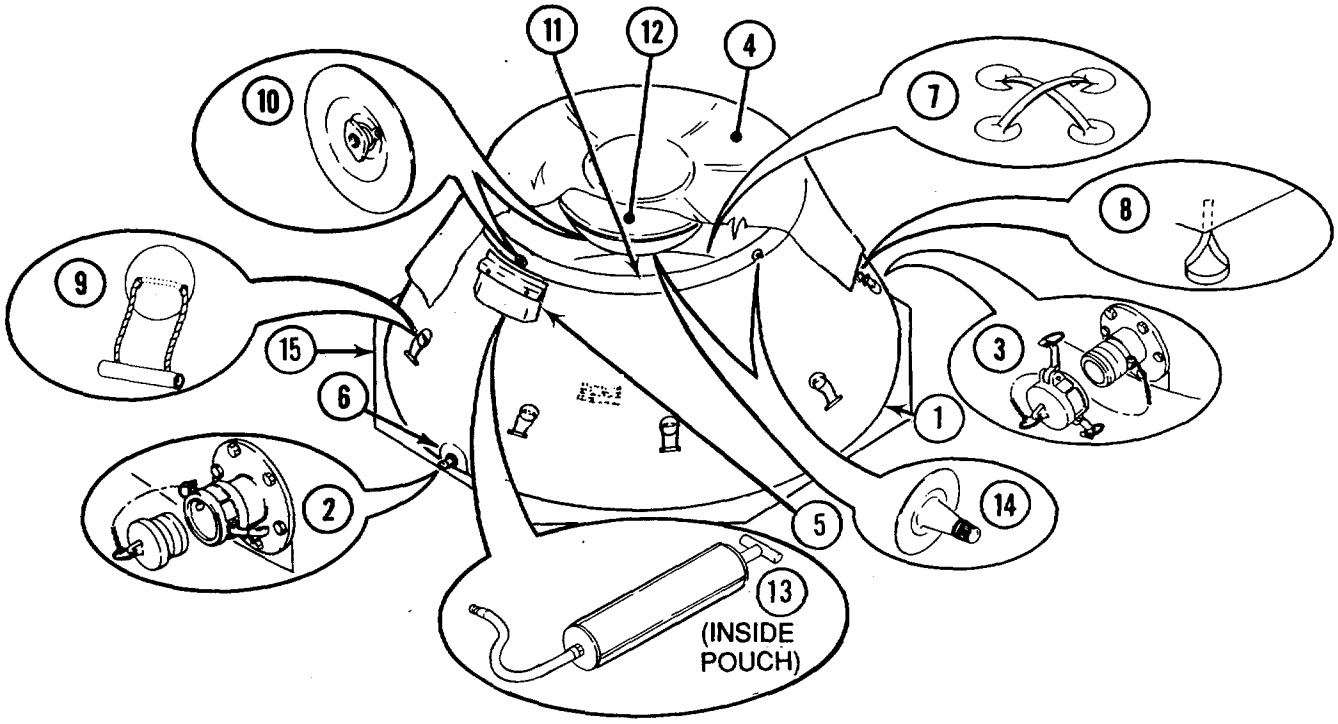
The Interval column of Table 1 tells you when to do a certain check or service.

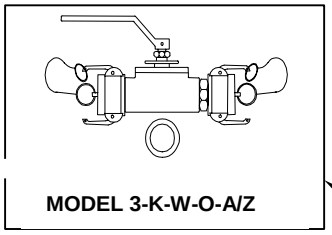
NOTE

When a check and service procedure is required for both weekly and before intervals, it is not necessary to perform the weekly procedure during the same week in which the before procedure was done.

The Procedure column of Table 1 tells you how to do the required checks and services. Carefully follow these instructions. When the procedure tells you to, notify your supervisor.

"Equipment Not Ready/Available If" column tells you when and why your equipment cannot be used.





NOTE: Model 90074 shown, others similar
Item 16, foot bellows, Model 91038 and WT2008 and Item 17, deflation valve, Model WT2008, not shown.

Table 1. Preventive Maintenance Checks and Services For Water Storage Tank

NOTE
Within designated interval, these checks are to be performed in the order listed.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Installation Area	Inspect the installation area for sticks and other sharp objects that might cause punctures and leaks.	Sharp objects are present.
2	Before		Tank Envelope (1)	Inspect for cuts, punctures and leaks. Model 3-K-W-O-A/Z: Inspect for damaged or missing zipper.	Tank envelope is cut, punctured or leaks. Zipper damaged or missing.
3	Before		Reinforcing Fittings (6)	Inspect threaded holes for damaged threads. Check that fittings are securely bonded to tank.	Fittings are damaged or separated from tank.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Cover (4)	Inspect for cuts or punctures. Model 3-K-W-O-A/Z has no cover.	Cover is cut or punctured.
5	Before		Float (12)	Inspect for cuts or punctures. Check that float is secured to underside of cover. Model WT2008: Check that float is secured in the netting holder.	Float is cut or punctured or separated from cover. Float separated from netting holder.
6	Before		Lift Handles (7) and Straps (8)	Inspect for cuts and tears. Check that handles and straps are secure.	Lift handles or straps are damaged.
7	Before		Handle-Toggles (9) (Models 90074/ 91038/WT2008 only)	Inspect handle for cuts or other damage. Inspect rope for cuts or frayed condition.	Handle-toggles are damaged.
8	Before		Inflation Valves (10) (Models 90074 and 91038 only)	Inspect valves for loose or damaged screws or other damage. Ensure valves can be rotated to both the open and closed positions.	Valves are damaged.
9	Before		Deflation Valves (17)	WT2008: Inspect valves for loose or damaged screws or other damage.	Valves are damaged.
10	Before		Hand Pump (13) (Model 90074 only)	Inspect hose for cuts or damaged fittings. Inspect pump for damaged fitting or preformed packing.	Hand pump or fittings are damaged. Hose is cut or fittings damaged. Preformed packing damaged or missing.
11	Before		Foot Bellows (16) (Models 91038 and WT2008)	Inspect hose for cuts or damaged fittings. Inspect bellows for damaged fitting or o-ring, cut or punctured bellows.	Bellows damaged to the point of being unusable.
12	Before		Fill/Discharge Fittings (2 & 3)	Inspect for damage, leakage, loose or missing bolts.	Fittings are damaged, leaking or loose. Missing bolts.
13	Before		Repair Kit (5)	Check for missing components (Table 1, WP 0004 00). Ensure instruction sheet is present.	Emergency repair items are missing.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
14	Before		Ball Valve and Fittings (18) (Models 3-K-W-O-A/Z and GTA-Z60TPW)	Inspect for damage, leakage or loose and frozen valve.	Valve or fittings are damaged or leaking. Valve is frozen.
15	Before		Automotive Valves (14) (Models 90074/ 91038/WT2008 only)	Inspect valves for damaged valve core or stem.	Valves are damaged.
16	Before		Ground Cloth (15) (Models 90074/3-K-W-O-A/Z/91038) Ground Cloth/Valise (Model GTA-Z60TPW)	Inspect spread out ground cloth for evidence of debris or covered debris that could damage tank. Inspect cloth for through holes that allow the tank to have direct contact with the ground.	Ground cloth or ground cloth/ valise is damaged.
17	During		Tank Envelope (1)	Inspect for cuts, punctures and leaks.	Envelope is cut, punctured or leaking.
18	During		Fill/Discharge Fittings (2 & 3)	Inspect for damage, leakage, loose or missing bolts.	Fittings are damaged, leaking or loose. Bolts missing.
19	After		Reinforcing Fittings (6)	Inspect threaded holes for damaged threads. Check that fittings are securely bonded to tank.	Fittings are damaged or separated from tank.
20	After		Handle Toggles (9) (Models 90074/91038/ WT2008 only)	Inspect handles for cuts or other damage. Inspect rope for cut or frayed condition.	Toggles are damaged.
21	After		Inflation Valves (10) (Models 90074 and 91038 only)	Inspect for loose or damaged screw or other damage. Ensure valves can be rotated to both the open and closed positions.	Valves are damaged.
22	After		Deflation Valve (17) (Model WT2008 only)	Inspect for loose or damaged screw or other damage. Ensure valves can be rotated to both the open and closed positions.	Valves are damaged.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
23	After		Hand Pump (13) (Model 90074 only)	Inspect hose for cuts or damaged fittings. Inspect hand pump for damaged fitting or preformed packing.	Hand pump or fittings are damaged. Hose is cut or fittings damaged. Preformed packing is damaged or missing.
24	After		Foot Bellows (16) (Models 91038 and WT2008 only)	Inspect hose for cuts or damaged fittings. Inspect bellows for damaged fitting or o-ring and cut or punctured bellows.	Bellows damaged to the point of being unusable.
25	After		Repair Kit (5)	Check for missing components (Table 1, WP 0004 00). Ensure instruction sheet is present.	Emergency repair items are missing.
26	After		Fill/Discharge Fittings (2 & 3)	Inspect for damage, leakage, loose or missing bolts.	Fittings are damaged, leaking or loose. Bolts missing.
27	After		Ball Valve and Fittings (18) (Models 3-K-W-O-A/Z and GTA-Z60TPW only)	Inspect for damage, leakage or loose and frozen valve.	Valve or fittings are damaged or leaking. Valve is frozen.
28	After		Automotive Valves (14) (Models 90074/ 91038/WT2008 only)	Inspect valves for damaged valve core or stem.	Valves are damaged.
29	Weekly		Tank Envelope (1)	Inspect for cuts, punctures and leaks.	Envelope is cut, punctured or leaking.
30	Weekly		Cover (4)	Inspect for cuts or punctures.	Cover is cut or punctured.
31	Weekly		Float (12)	Inspect for cuts or punctures. Check that float is secured to underside of cover. Model WT2008: Check that float is secured to netting holder.	Float is cut, punctured or separated from cover. Float is separated from netting holder.
32	Weekly		Repair Kit (5)	Check for missing components (Table 1, WP 0004 00). Ensure instruction sheet is present.	Emergency repair items are missing.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
33	Weekly		Automotive Valves (14) (Models 90074/ 91038/WT 2008)	Inspect valves for damaged valve core or stem.	Valves are damaged.
34	Monthly		Automotive Valves (14) (Models 90074/ 91038/WT 2008)	Inspect valves for damaged valve core or stem.	Valves are damaged.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
OPERATOR MAINTENANCE PROCEDURES

GENERAL INSTRUCTIONS

Maintenance instructions in this section will list resources required, personnel required and equipment condition for start of procedure, except as noted below:

- Personnel required are listed only if the task requires more than one.
- The normal standard equipment condition to start a maintenance task is water tank drained and deflated. EQUIPMENT CONDITION is not listed unless some other condition is required.

EQUIPMENT	MAINTENANCE PROCEDURE
Foot Bellows (Models 91038/WT2008)	WP 0011 00
Hand Pump (Model 90074)	WP 0012 00
Automotive Valve (Models 90074/91038/WT2008)	WP 0013 00

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FOOT BELLOWS (MODELS 91038/WT2008)
INSPECTION, REPAIR AND REPLACEMENT

INITIAL SETUP

Materials/Parts
Rag, wiping
(Item 2, WP 0030 00)

Mandatory Replacement Parts
Preformed packing
(Item 2, WP 0033 00)

INSPECTION

Hose

1. Clean hose (1) with a damp rag.

2. Inspect hose (1) for cuts or other damage.

3. Inspect male fitting (2) and female fitting (3) for cracks, worn or damaged threads, or other damage.

Foot Bellows

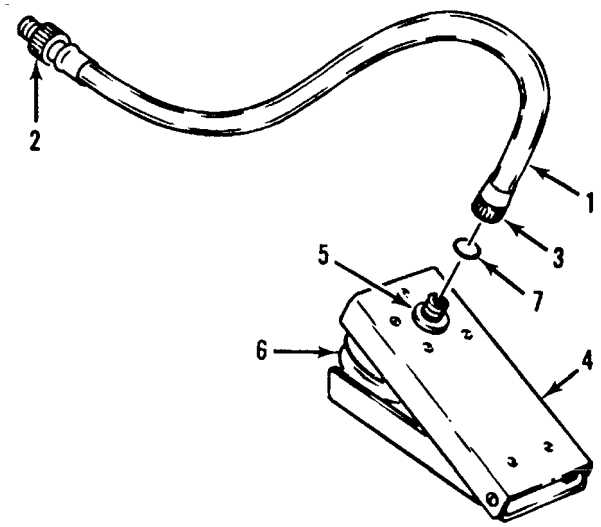
1. Clean foot bellows (4) with a damp rag.

2. Inspect fitting (5) for cracks, worn or damaged threads, or other damage.

3. Inspect bellows (6) for cuts, punctures or other damage.

4. Work the foot bellows (4) up and down to ensure it operates freely and will provide air pressure through the fitting (5).

5. Inspect o-ring (7) for cracks, deterioration or cuts.



REPAIR

1. Remove damaged o-ring (7) from foot bellows threaded outlet fitting (5).

2. Install new o-ring (7) on foot bellows threaded outlet fitting (5) and test for operation.

REPLACEMENT

1. Replace hose (1) if damaged.

2. If foot bellows (4) is damaged to the extent that it cannot perform its function, the entire foot bellows must be replaced.

END WORK PACKAGE

OPERATOR MAINTENANCE
HAND PUMP (MODEL 90074)
INSPECTION, REPAIR AND REPLACEMENT

INITIAL SETUP

Materials/Parts
Rag, wiping
(Item 2, WP 0030 00)

Mandatory Replacement Parts
Preformed packing
(Item 2, WP 0033 00)

INSPECTION

Hose

1. Clean hose (1) with a damp rag.

2. Inspect hose (1) for cuts or other damage.

3. Inspect male fitting (2) and female fitting (3) for cracks, worn or damaged threads or other damage.

Hand Pump

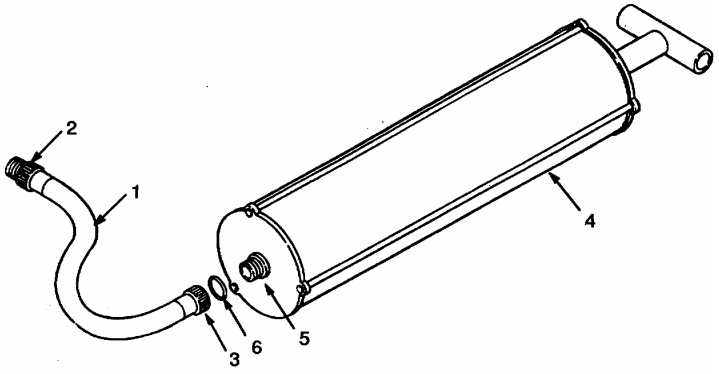
1. Clean hand pump (4) with a damp rag.

2. Inspect fitting (5) for cracks, worn or damaged threads or other damage.

3. Inspect hand pump (4) for punctures or other damage.

4. Work the hand pump (4) up and down to ensure it operates freely and will provide air pressure through the fitting (5).

5. Inspect o-ring (6) for cracks, deterioration or cuts.



REPAIR

1. Remove damaged o-ring (6) from hand pump threaded outlet fitting (5)

2. Install new o-ring (6) on hand pump threaded outlet fitting (5) and test for normal operation.

REPLACEMENT

1. Replace hose (1) if damaged.

2. If hand pump (4) is damaged to the extent that it cannot perform its function, entire hand pump must be replaced.

3. Replace o-ring (6) if damaged.

END OF WORK PACKAGE

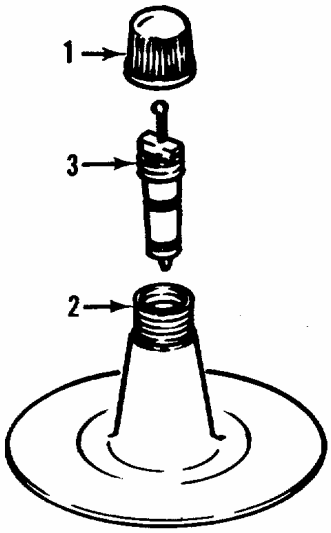
OPERATOR MAINTENANCE
AUTOMOTIVE VALVE (MODELS 90074/91038/WT2008)
REPLACEMENT

INITIAL SETUP

Tools
Tire Valve Tool
(Item 1, Table 2, WP 0026 00)

REPLACE

1. Remove cap (1) from valve stem (2).
2. Remove valve core (3) from valve stem (2).
3. Thread new valve core (3) into valve stem (2).
4. Install cap (1) onto valve stem (2).



END OF WORK PACKAGE

CHAPTER 6

UNIT MAINTENANCE INSTRUCTIONS
FOR
TANK, WATER STORAGE, 3000 GALLONS

OPERATOR AND UNIT MAINTENANCE INSTRUCTION
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
UNIT REPAIR; TOOLS; SPECIAL TOOLS; TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

COMMON TOOLS AND EQUIPMENT.

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

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

For Models 90074, 91038 and WT2008, special tools or TMDE required for operation or maintenance of the collapsible fabric water tank are the tire valve tool and the stitcher (refer to RPSTL, WP 0028 00). Support equipment consists of the repair kit (Table 1, WP 0029 00), foot bellows (WP 0011 00) and the hand pump (WP 0012 00), which are furnished with the tank.

For Models GTA-Z60TPW and 3-K-W-O-A/Z, no special tools or TMDE are required for operation or maintenance of the collapsible fabric water tank. Support equipment consists of the repair kit (Table 1, WP 0029 00) which is furnished with the tank.

REPAIR PARTS.

Repair parts are listed and illustrated in WP 0028 00 of this manual.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE INSTRUCTION
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
UNIT SERVICE UPON RECEIPT

SITE AND SHELTER REQUIREMENTS.

Choose a site that is free from sharp objects (rocks, sticks, glass, etc.) which could cut or puncture the tank.

WARNING

Serious injury to personnel, or damage to tank may occur if tank is placed over drop offs greater than 4 inches (0.1 meter).

The collapsible fabric water tank may be installed on a slope of up to 10 percent [1 foot (0.3 meter) rise in 10 foot (3 meters) run], but the tank base should not rest over abrupt drop offs greater than 4 inches (0.1 meter).

SERVICE UPON RECEIPT OF MATERIEL.

Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage in accordance with the instructions of DA PAM 738-750. Marine Corps users refer to MCO P4610.19 and use DD Form 364.

Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA PAM 738-750. Marine Corps users refer to MCO 44303.

Check to see whether the equipment has been modified.

INSTALLATION INSTRUCTIONS.

Refer to WP 0005 00.

PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT.

No preliminary servicing or adjustment is required.

END OF WORK PACKAGE

UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
PMCS PROCEDURES INTRODUCTION

INTRODUCTION.

There are no PMCS procedures at Unit level.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
UNIT MAINTENANCE PROCEDURES

GENERAL INSTRUCTIONS

Maintenance instructions in this section will list resources required, personnel required and equipment conditions for start of procedure, except as noted below:

- Personnel required are listed only if the task requires more than one.
- The normal standard equipment condition to start a maintenance task is water tank drained and deflated. EQUIPMENT CONDITION is not listed unless some other condition is required.

EQUIPMENT	MAINTENANCE PROCEDURE
Tank Assembly	WP 0018 00
Inflation Valve Assembly (Models 90074/91038)	WP 0019 00
Handle-Toggle (Models 90074/91038)	WP 0020 00
Fill/Discharge Fitting, Female Cam-Lock Coupling	WP 0021 00
Fill/Discharge Fitting, Male Cam-Lock Coupling	WP 0022 00
Ball Valve, Male and Female Cam-Lock Coupling (Models 3-K-W-O-A/Z/GTA-Z60TPW)	WP 0023 00

END OF WORK PACKAGE

UNIT MAINTENANCE
TANK ASSEMBLY
REPAIR

INITIAL SETUP

Tools
Stitcher
(Item 2, Table 2, WP 0026 00)

Materials/Parts
Repair Kit, Collapsible Tanks and Drums
(Item 3, WP 0030 00)

Equipment Conditions
Tank empty and dry
(WP 0005 00)

Special Environmental Conditions
Dry ventilated area. Minimum ambient temperature of 41°F (5°C). Maximum relative humidity of 90%.

General Safety Instructions
Observe all WARNINGs and CAUTIONs. Review all Material Safety Data Sheets
(Item 15, Table 1)

REPAIR

NOTE

This procedure consists of patching cuts and punctures in the tank fabric. If tank must be put back in immediate service, or materials are not available, perform emergency repairs, WP 0006 00, instead of this task.

There are three methods to repair tank fabric which holds water.

- Preferred Method: Patches are used both inside and outside of tank.
- First Alternate: Single patch on inside of tank.
- Second Alternate: Single patch on outside of tank.

Fabric which does not hold water needs only one exterior patch.

1. Ensure that all components of the repair kit (ROCTAD) are present before starting repair. Refer to Table 1.

2. Provide a smooth, firm surface (table, board, etc.) under the tank fabric to be repaired. Position the protective sheet (Item 12, Table 1) between the area to be repaired and the adjacent tank fabric to prevent the fabric from sticking together.

3. Use repair patch(es) (Item 1, Table 1) in a size required to overlap hole at least 2 inches (5.1 cm) on all sides.

4. If two patches (Item 1, Table 1) are required to cover the hole, make sure the second patch overlaps the first patch by 2 inches (5.1 cm).

Table 1. Collapsible Fabric Tank and Drums Repair Outfit Components (OF6E1) BOV-USA-1

ITEM NO.	DESCRIPTION	QTY
1	Coated Fabric Patches	2
2	Scruffing Brush	1
3	Q.D. Surface Conditioner	2 cans
4	D & A Fluid Elastomer Base	2 cans
5	D & A Fluid Elastomer Solidifier	2 cans
6	Mixing stirrer	1
7	Protective Gloves, Disposable, Size Large	2 pair
8	Synthetic Bristle Brush, 1 Inch wide	3
9	Cleaning and solvent Cloth	1
10	N.F. Cleaner/Degreaser, 1 pint	1 can
11	Application Spatula	2
12	Protective Polyethylene sheet (18 X 18 inch)	1
13	Respirator Mask	2
14	Instruction with step-by-step photographs	1
15	Material safety data sheets, each set has sheets for 4 chemicals	2 sets
16	Resealable Bag, Non-Reflective Pan	1
17	Razor Knife	1
18	Mixing Bowl	2

WARNINGS

The cleaning fluids and adhesives in the repair kit are flammable and toxic to the skin, eyes, and respiratory tract. Skin and eye protection are required. Avoid prolonged breathing of vapors, and minimize skin contact. Protective gloves and respirator masks are part of the repair kit. Good general ventilation is normally adequate. Keep away from excessive heat, open flames, or other sources of ignition. Do not eat, drink, or smoke while using these chemicals.

Do not use the Cleaner/Degreaser near aluminum fittings on the tank. Contact of the Cleaner/Degreaser to aluminum can cause explosives to form. These gases can cause further damage to the tank or injury to personnel.

NOTE

Degreasing tank fabric can result in processing oil and waxes being drawn to the fabric surface. This impairs adhesion of the Fluid Elastomer (adhesive) to the tank fabric. Tank fabric should be tested for compatibility with Cleaner/Degreaser.

5. Test the Cleaner/Degreaser (Item 10, Table 1) on a small area of the tank fabric.

   a. Moisten the cleaning cloth (Item 9, Table1) with a small amount of Cleaner/Degreaser (Item 10, Table 1).

   b. Rub the cloth on a small area of the tank. If a greasy film appears, skip to step 7. Otherwise, go to step 6.

6. Clean the entire area of tank to be patched with Cleaner/Degreaser (Item 10, Table 1).

7. Undercut fine edges of the hole with razor knife (Item 17, Table 1). Scuff the mating surfaces of both the tank and patch(es) with scuffing brush (Item 2, Table 1). Roughened area on tank should extend approximately 1 inch (2.5 cm) on all sides beyond the surface where the patch(es) will be installed.

8. Brush away loose contamination and degrease again if needed.

NOTE

One can of Surface Conditioner should cover approximately 6.5 sq. ft. (0.63 sq. meters). All mixing and application tools should be cleaned immediately after use with Cleaner/Degreaser.

9. Immediately brush a thin, even coat of Surface Conditioner (Item 3, Table 1) onto the area of the tank to be patched. Use the brush (Item 8, Table 1) as a stipple to ensure the thinnest possible film.

NOTE

The touch dry time will be dependent on the ambient temperature and relative humidity. The touch dry time at 68°F (200C) and 50% relative humidity will be 20 to 30 minutes. Overcoating of Surface Conditioner with Fluid Elastomer (adhesive) must take place within 4 hours.

10. Let Surface Conditioner (Item 8, Table 1) set until touch dry before overcoating with mixed Fluid Elastomer (adhesive). Test by lightly touching one knuckle down into Surface Conditioner. Lift slowly. If no conditioner is left on knuckle, it is dry. If a second (outside) patch is to be applied, repeat steps 7 through 10 for outside of tank before going onto step 11.

NOTE

Both the Base and Solidifier components of the Fluid Elastomer must remain sealed until just before application. For best results do not apply the mixed adhesive under the following conditions:

- When the temperature is below 41 °F (5°C)
- When the relative humidity is above 90%
- During rain, snow, fog, or mist
- When there is moisture on the tank surface or moisture is likely to condense on the tank before the adhesive cures.
- When the working environment is likely to be contaminated by oil or grease from adjacent equipment or smoke from kerosene heaters or tobacco smoking.

11. Empty entire contents of one can of the Fluid Elastomer Base (Item 5, Table 1).

12. Shake one can of the Fluid Elastomer Solidifier (Item 5, Table 1). Pour the contents over the Elastomer Base (Item 4, Table 1) in the mixing bowl (Item 18, Table 1).

13. Using the mixing stirrer (Item 6, Table 1), immediately stir the Fluid Elastomer Base (Item 4, Table 1) and Solidifier (Item 5, Table 1). Stir at least 2 minutes to form an adhesive.

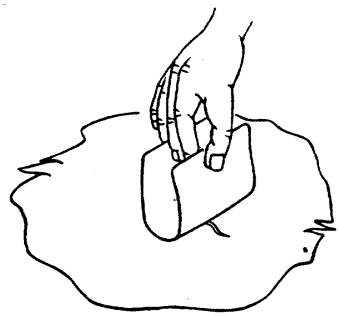
NOTE

Use all of the mixed adhesive within the times shown in Table 2.

14. Using one of the brushes (Item 8, Table 1) or the plastic applicator (Item 11, Table 1), apply one even coat of adhesive to the roughened surface of the tank and the prepared patch. The coat of adhesive should be approximately 10 mil. (0.025 cm) thick.

15. Let adhesive set until tacky (approximately 5 to 10 minutes). Test by lightly touching one knuckle into adhesive. Lift slowly. When knuckle lifts fabric briefly, and no adhesive is left on knuckle, it is tacky.

16. Once adhesive is tacky, bring ends of patch together (adhesive side out), and position center of patch onto center of hole as shown.



17. Smooth down patch with edge of hand, one end at a time, so as to avoid any air bubbles.

18. Use a stitcher, or equivalent, to firmly roll down the entire patch, from center of patch out toward edges to prevent formation of air bubbles.

19. If a second patch is being applied, proceed with step 20, below; otherwise proceed to step 22.

NOTE

Maximum shelf life of mixed adhesive is given in Table 2. If second patch is to be applied, ensure that it is done within this time limit. Repair will not succeed if mixed adhesive sits too long.

Table 2. Shelf Life of Mixed Adhesive

Temperature	**41°F (5°C)**	**59°F (15°C)**	**77°F (25°C)**
Use all material Within	**25 minutes**	**20 minutes**	**10 minutes**

20. Let first patch set for a few minutes (approximately 2 to 3).

21. Repeat steps 14 through 18, above, to apply second (outside) patch. Outside patch must be aligned with inside patch (outline of inside patch will be visible).

22. Allow repair to set until cured before flexing fabric or putting tank back into service. Curing times are given in Table 3.

Table 3. Curing Times for Fabric Repair

NOTE

These times are for a thickness of approximately 0.10 inches (0.25 cm); they will be reduced for thicker sections and extended for thinner sections.

Temperature	Movement of Use Involving No Loading Or Immersion	Full Mechanical Or Thermal Loading	Immersion In Chemicals
41° F (5°C)	6 hours	72 hours	120 hours (5 days)
50° F (10°C)	4 hours	48 hours	84 hours
59° F (15° C)	3 hours	48 hours	72 hours
68° F (20° C)	2 hours	24 hours	60 hours
77° F (25° C)	1.5 hours	24 hours	48 hours
86° F (30° C)	1 hour	24 hours	36 hours

END OF WORK PACKAGE

UNIT MAINTENANCE
INFLATION VALVE ASSEMBLY (Models 90074/91038)
REPLACEMENT

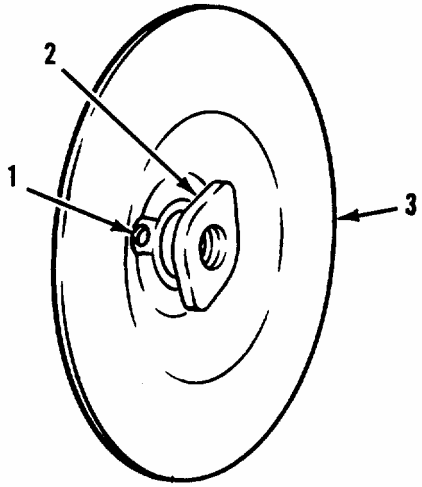
INITIAL SETUP

Tools
Tool Kit, General Mechanics
(Item 3, Table 2, WP 0026 00)

REPLACEMENT

NOTE
For Models 91038 and 90074, there are two inflation valve assemblies: one on the tank collar and one on the cover float.

1. Loosen screw (1).
2. Unthread and remove valve (2) from flange (3).
3. Thread a new valve (2) into flange (3).
4. Tighten screw (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
HANDLE TOGGLE (Models 90074/91038)
REMOVAL AND INSTALLATION
REPAIR

INITIAL SETUP

Tools

Tool Kit, General Mechanics
(Item 3, Table 2, WP 0026 00)
Hacksaw
Drill, 1/2"
Drill bit, 1/2"
(Item 4, Table 2, WP 0026 00)

REMOVAL

Handle

1. Untie knot (4).

2. Remove handle (1) from rope (2).

Rope

Pull rope (2) out of base patch (3) on tank, if it is being replaced.

REPAIR

Refer to WP 0031 00, Items 1 and 2 for repair.

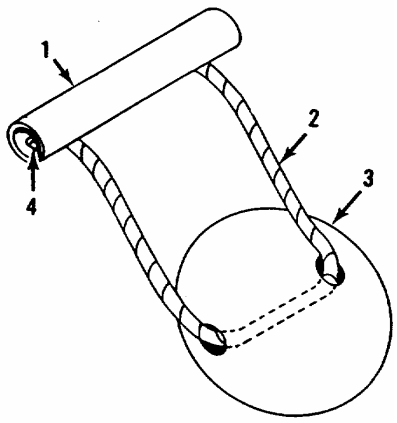
CAUTION

Use caution when feeding rope through base patch. Ensure instrument is blunt; otherwise, damage may occur.

INSTALLATION

Rope

Install new rope (2) through holes in base patch (3) on tank by feeding the rope through base patch.



Handle

1. Insert ends of rope (2) into holes in handle (1).
2. Bring ends of rope (2) together and tie a knot (4) to secure handle (1).
3. Push knot (4) into end of handle (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
FILL/DISCHARGE FITTING, FEMALE CAM-LOCK COUPLING
REMOVAL, SERVICE, REPAIR AND INSTALLATION

INITIAL SETUP

Tools
Tool Kit, General Mechanics
(Item 3, Table 2, WP 0026 00)
Torque Wrench, 0-175 ft-lb
(Item 4, Table 2, WP 0026 00)

Materials/Parts
Cleaning Compound
(Item 1, WP 0030 00)
Rag, Wiping
(Item 2, WP 0030 00)
Chain
(Figure 1, WP 0031 00)

Equipment Condition
Tank drained (WP 0005 00)

Mandatory Replacement Parts
Gasket, 2 inch
(Item 1, WP 0033 00)
Gasket, 4 inch Flange
(Item 3, WP 0033 00)
Gasket, 3.5 Flange (Model 3-K-W-O-A/Z)
(Item 4, WP0033 00)

REMOVAL

Dust Plug

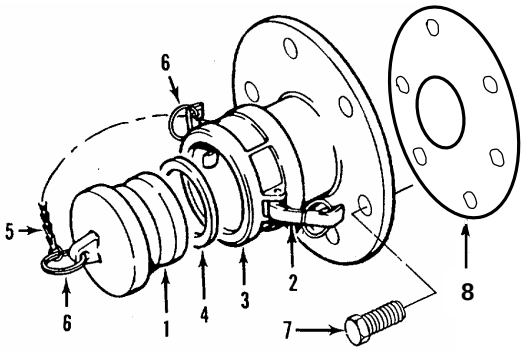
1. Pull cam-lever arms (2) on coupling (3) out, away from body of coupling (3).
2. Remove dust plug (1) from coupling (3).
3. Disconnect chain (5) and key ring (6) from coupling (3).
4. Disconnect chain (5) and key ring (6) from plug (1).

Gasket

Remove gasket (4) from coupling (3) and discard.

Coupling

Remove the six bolts (7) or eight bolts (7) (Model 3K-W-O-A/Z) and remove coupling (3) from tank. Remove gasket (8) and discard.



SERVICE

1. Clean dust plug (1) and coupling (3) with cleaning compound, and rinse thoroughly.

2. Inspect dust plug (1) for cracks or breaks.

3. If damaged, replace dust plug (1) with new dust plug.

4. Inspect chain (5) and key rings (6) for cracks, distortion, or other damage.

5. If damaged, replace chain (5) and key rings (6).

6. Inspect bolts (7) for damaged threads.

7. If damaged, replace bolts (7).

REPAIR

Repair is limited to replacement of damaged components.

INSTALLATION

Coupling

1. Install coupling (3) and new gasket (8) onto tank with six bolts (7), or eight bolts (7) (Model 3-K-W-O-A/Z).

2. Torque to 15 to 20 ft-lb.

Gasket

1. Install new gasket (4) into coupling (3).

2. Make sure gasket (4) is properly seated in groove.

Dust Plug

1. Connect chain (5) and key ring (6) to dust plug (1).

2. Connect chain (5) and key ring (6) to coupling (3).

3. Pull cam-lever arms (2) on coupling (3) outward, away from body of coupling (3).

4. Install dust plug (1) in coupling (3).

5. Push cam-lever arms (2) on coupling (3) inward toward body of coupling until they lock.

END OF WORK PACKAGE

UNIT MAINTENANCE
FILL/DISCHARGE FITTING, MALE CAM-LOCK COUPLING
REMOVAL, SERVICE, REPAIR AND INSTALLATION

INITIAL SETUP

Tools
Tool Kit, General Mechanics
(Item 3, Table 2, WP 0026 00)
Torque Wrench
(Item 4, Table 2, WP 0026 00)

Materials/Parts
Cleaning Compound
(Item 1, WP 0030 00)
Rag, Wiping
(Item 2, WP 0030 00)
Chain
(Figure 1, WP 0031 00)

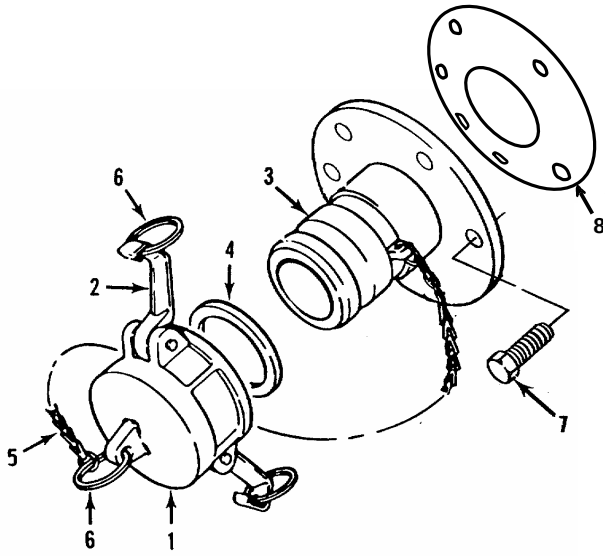
Equipment Condition
Tank drained (WP 0005 00)

Mandatory Replacement Parts
Gasket, 2 inch
(Item 1, WP 0033 00)
Gasket, 4inch Flange
(Item 3, WP 0033 00
Gasket, 3.5 Flange (Model 3-K-W-O-A/Z only)
(Item 4, WP 0033 00)

REMOVAL

Dust Plug

1. Pull cam-lever arms (2) on coupling (3) out, away from body of coupling (3).
2. Remove dust plug (1) from coupling (3).
3. Disconnect chain (5) and key ring (6) from coupling (3).
4. Disconnect chain (5) and key ring (6) from cap (1).



Gasket

Remove gasket (4) from coupling (3) and discard.

Coupling

Remove six bolts (7) or eight bolts (7) (Model 3-K-W-O-A/Z), and remove coupling (3) from tank. Remove gasket (8) and discard.

SERVICE

1. Clean dust cap (1) and coupling (3) with cleaning compound, and rinse thoroughly.

2. Inspect dust cap (1) for cracks or breaks.

3. If damaged, replace dust cap (1) with new dust cap.

4. Inspect chain (5) and key rings (6) for cracks, distortion or other damage.

5. If damaged, replace chain (5) and key rings (6).

6. Inspect bolts (7) for damaged threads.

7. If damaged, replace bolts (7).

REPAIR

Repair is limited to replacement of damaged components.

INSTALLATION

Coupling

1. Install coupling (3) and new gasket (8) onto tank with six bolts (7), or eight bolts (7) (Model 3-K-W-O-A/Z).

2. Torque to 15 to 20 ft-lb.

Gasket

1. Install new gasket (4) into dust cap (1).

2. Make sure gasket (4) is properly seated in groove.

Dust Plug

1. Connect chain (5) and key ring (6) to dust cap (1).

2. Connect chain (5) and key ring (6) to coupling (3).

3. Pull cam-lever arms (2) on dust cap (1) outward and away from chain (5).

4. Install dust cap (1) onto end of coupling (3).

5. Pull cam-lever arms (2) upward and inward toward dust cap (1) until they lock.

END OF WORK PACKAGE

UNIT MAINTENANCE
BALL VALVE, MALE AND FEMALE CAM-LOCK COUPLINGS
(Models 3-K-W-O-A/Z/GTA-Z60TPW)
REMOVAL, SERVICE, REPAIR AND INSTALLATION

INITIAL SETUP

Tools
Tool Kit, General Mechanics
(Item 3, Table 2, WP 0026 00)

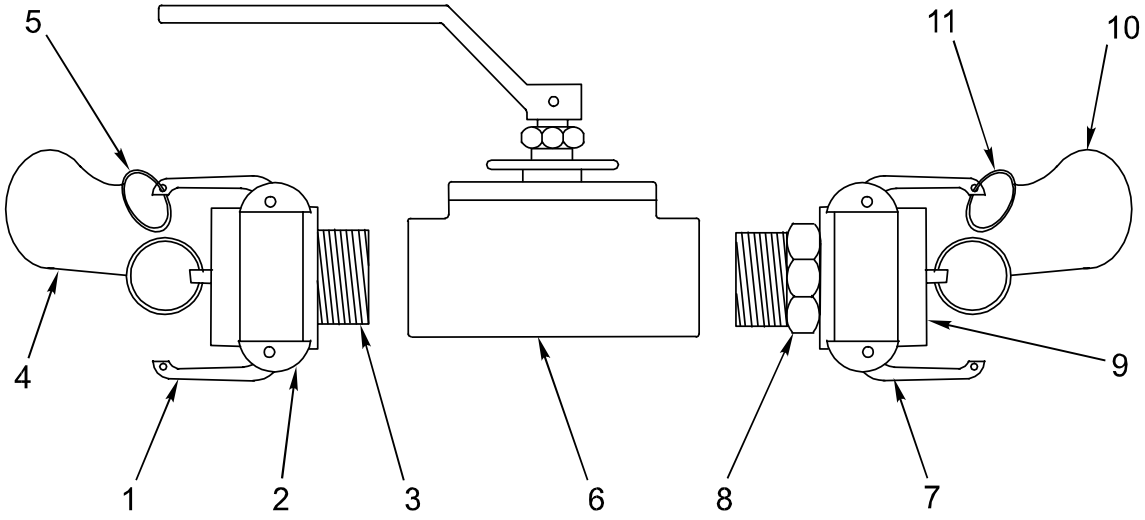
Equipment Condition
Tank drained (WP 0005 00)

Materials/Parts
Cleaning Compound
(Item 1, WP 0030 00)
Rag, Wiping
(Item 2, WP 0030 00)
Chain
(Figure 1, WP 0031 00)

REMOVE

Dust Cap

1. Pull cam-lever arms (1) on dust cap (2) out, away from body of cap (2).
2. Remove dust cap (2) from coupling (3).
3. Disconnect chain (4) and key ring (5) from dust cap (2).



Coupling

Unthread coupling (3) from ball valve (6).

Dust Plug

1. Pull cam-lever arms (7) on coupling (8) out, away from body of coupling (8).

2. Remove dust plug (9) from coupling (8).

3. Disconnect chain (10) and key ring (11) from plug (9).

SERVICE/INSPECT

1. Clean dust cap (2), dust plug (9), couplings (3 and 8) and ball valve (6) with cleaning compound, and rinse thoroughly.

2. Inspect dust cap (2), dust plug (9), and couplings (3 and 8) for cracks or breaks.

3. If damaged, replace.

4. Inspect ball valve (6) for cracks, breaks or frozen valve.

5. If damaged, replace.

6. Inspect chains (4 and 10) and key rings (5 and 11) for cracks, distortion, or other damage.

7. If damaged, replace.

REPAIR

Repair is limited to replacement of damaged components.

INSTALLATION

Coupling

Thread coupling (8) into ball valve (6) and tighten.

Dust Plug

1. Connect chain (10) and key ring (11) to dust plug (9).

2. Pull cam-lever arms (7) on coupling (8) outward, away from body of coupling (8).

3. Install dust plug (9) in coupling (8).

4. Push cam-lever arms (7) on coupling (8) inward toward body of coupling until locked.

Coupling

Thread coupling (3) into ball valve (6) and tighten.

Dust Cap

1. Connect chain (4) and key ring (5) to dust cap (2).
2. Pull cam-lever arms (1) on dust cap (2) outward and away from body of dust cap (2).
3. Install dust cap (2) onto end of coupling (3).
4. Pull cam-lever arms (1) upward and inward toward dust cap (2) until locked.

END OF WORK PACKAGE

UNIT MAINTENANCE
PREPARATION FOR STORAGE OR SHIPMENT

PRESERVATION PROCEDURES FOR STORAGE OR SHIPMENT

1. Drain all water from the tank (WP 0005 00).

CAUTION

Make sure tank is completely dry before storing. Water will create mildew, decreasing the life of the tank if it is not completely dry.

2. Clean and dry the tank (WP 0005 00).

3. Models 90074, 91038 and WT2008, make sure all inflation valves (WP 0004 00) are open.

CRATING INSTRUCTIONS

1. Make sure tank has been properly folded (WP 0005 00).

CAUTION

Use care when packing the tank. Tank will be easily damaged by tools, packing box nails, or other sharp objects.

2. Tank will be packed in a close-fitting box or container. When tank is disassembled and refolded, it is to be replaced in the original box or container.

3. Each tank is provided with suitable packing around the tank to prevent the tank fabric from being damaged by contact with the inside of the box or container. When tank is replaced in original box or container, the packing material is replaced around the tank in the same manner as received.

ADMINISTRATIVE STORAGE

1. Placement of equipment in administrative storage should be for short periods of time when a shortage of maintenance effort exists. Items should be in mission readiness within 24 hours or within the time factors as determined by the directing authority. During the storage period, appropriate maintenance records will be kept.

2. Before placing the equipment in administrative storage, current preventive maintenance checks and services should be completed, shortcomings and deficiencies should be corrected, and all Modification Work Orders (MWO) should be applied.

3. Inside storage is preferred for items selected for administrative storage. If inside storage is not available, trucks, vans, conex containers, and other containers may be used. Refer to WP 0002 00 for ambient storage temperature range.

END OF WORK PACKAGE

CHAPTER 7

SUPPORTING INFORMATION
FOR
TANK, WATER STORAGE, 3000 GALLONS

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
REFERENCES

REFERENCES

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

MAINTENANCE

AR 700-138	Army Logistics Readiness and Sustainability.
DA PAM 738-750	The Army Maintenance Management Systems (TAMMS)
DA PAM 738-751	Functional Users Manual for TAMMS
MCO 1650.17	Marine Corps Military Incentive Awards Program
NAVMAC 10772	Recommended Changes to Publications
TM 4700-15/1	Equipment Record Procedures
TM 750-244-3	Destruction of Equipment to Prevent Enemy Use

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
SF Form 364	Report of Discrepancy
SF Form 368	Quality Deficiency Report

FIELD MANUALS

FM 21-11	First Aid
FM-3, FM-4, FM-5	Detailed Decontamination Procedures

MISCELLANEOUS

SB 740-99-1	Storage Serviceability Standard
CTA 50-790	Expendable/Durable Items (except medical, Class V repair parts, and heraldic items)
CTA 8-100	Army Medical Dept. Expendable/Durable Items

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
MAINTENANCE ALLOCATION CHART

MAINTENANCE ALLOCATION CHART (MAC)

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army/Marine Corps 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:

Unit – includes two subcolumns, C (operator/crew) and O (unit) maintenance.

Direct Support – includes an F subcolumn.

General Support – includes an H subcolumn.

Depot – includes a D subcolumn.

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

Maintenance Functions

Maintenance functions will be limited to and 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.

2. Test - To verify serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with prescribed standards.

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, hydraulic fluids, or gases.

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 out optimum or desired performance.

6. Calibrate - To determine and cause corrections to be made or to be adjusted on instruments or 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 equipment or system.

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 3rd position code of the SMR code.

9. Repair - The application of maintenance services, including fault location/troubleshooting, removal/installation, and 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.

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 (i.e., DMWR). Overhaul is normally the highest degree of material maintenance preformed 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 material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

Columns In The MAC Table 1.

1. Column 1, Group Number, lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."

2. Column 2, Component/Assembly, contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

3. Column 3, Maintenance Functions, lists the functions to be performed on the item listed in Column 2.

4. Column 4, Maintenance Level, specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work-time figures will 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.

5. Column 5, Tools and Test Equipment, specifies, by code, required tool and test equipment requirements.

6. Column 6, Remarks, when applicable, contains a letter code, in alphabetical order.

Explanation of Columns In Table 2. Tool and Test Equipment Requirements

1. Column 1, Reference Code correlates with a code used in the MAC, Column 5.

2. Column 2, Maintenance Level is the lowest level of maintenance authorized to use the tool or test equipment.

3. Column 3, Nomenclature, names or identifies the tool or test equipment.

4. Column 4, National Stock Number of the tool or test equipment.

5. Column 5, Tool Number is the manufacturer's part number, model number, or type number.

Explanation of Columns In Table 3. Remarks

1. Column 1, Remarks Code is recorded in Column 6 of Table 1.

2. Column 2, Remarks, lists information pertinent to the maintenance function being performed as indicated in the MAC Table 1.

Table 1. MAC for Fabric Tank, Water Storage, 3000 Gallons

(1) Group Number	(2) Component /Assembly	(3) Maint. Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		DS	GS	Depot		
			C	O	F	H	D		
00	TANK, FABRIC, COLLAPSIBLE WATER ASSY.								
01	TANK ENVELOPE	Inspect Repair	0.5 0.5	 1.5				 2	 A
0101	HANDLE-TOGGLES	Inspect Repair	0.1	 0.5				 3,4	
0102	FLUID DIS-CHARGE FITTINGS, 2”	Inspect Repair	0.2	 0.5				 3,4	
0103	VALVE, AUTOMOTIVE	Inspect Replace	0.1	 0.2				 1	
0104	VALVE, BALL, 2”	Inspect Repair		0.2 0.1				 3,4	
02	COVER AND FLOAT	Inspect Replace Repair	0.1 0.1	 1.0				 2	
03	ACCESSORY ITEMS	Inspect Replace Repair	0.1 0.1 0.1						

Table 2. Tools and Test Equipment for Fabric Tank, Water Storage, 3000 Gallons

Tool or Test Equipment Ref Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	C	Tire Valve Tool	5120-00-308-3809	GA143A (CAGE: 55719)
2	O	Stitcher	5120-00-293-0392	MIL-S-45179 (CAGE: 81349)
3	O	Tool Kit, General Mechanics	5180-00-177-7033	SC5180-90-CL-N26
4	O	Shop Equipment, Automotive Maint. & Repair; Organizational Maint. Common No. 1	4910-00-754-0654	SC4910-95-CL-A74-HR

Table 3. Remarks for Fabric Tank, Water Storage, 3000 Gallons

Remarks Code	Remarks
A	Repair on tank envelope limited to the extent of emergency repairs (WP 0006 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit, maintenance of the Tank. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages:

1. Repair Parts List Work Packages. Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name in FIG. BULK at the end of the work packages. Repair parts kits are listed separately in their own functional group and work package. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.

2. Special Tools List Work Packages. Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII shall not be listed.

3. Cross-Reference Indexes Work Packages. There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR Code (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout:

Source Code	**Maintenance Code**		**Recoverability Code**
___	___		___
xx	xx		xx
1st two positions: How to get an item.	3rd position: Who can install, replace or use the item.	4th position: Who can do complete repair* on the item.	5th position: Who determines disposition action on unserviceable items.

*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow.

Source Code	Application/Explanation
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the level indicated by the code entered in the 3rd position of the SMR code. **NOTE** Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO-Made at unit/ AVUM level MF-Made at DS/ AVIM level MH-Made at GS level ML-Made at SRA MD-Made at depot	Items with these codes are not to be requested/ requisitioned individually. They must be made from bulk material which is identified by the P/N in the DESCRIPTION AND USABLE ON CODE (UOC) column and list in the bulk material group work package of the RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.
AO-Assembled by unit/AVUM level AF-Assembled by DS/AVIM level AH-Assembled by GS level AL-Assembled by SRA AD-Assembled by depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position of the SMR code, authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
XA	Do not requisition an "XA" coded item. Order the next higher assembly. (Refer to the NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and P/N.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.
XD	Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and P/N given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes except for those items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance.

Maintenance Code		Application/Explanation
C	--	Crew or operator maintenance done within unit/AVUM maintenance.
O	--	Unit level/AVUM maintenance can remove, replace, and use the item.
F	--	Direct support/AVIM maintenance can remove, replace, and use the item.
H	--	General support maintenance can remove, replace, and use the item.
L	--	Specialized repair activity can remove, replace, and use the item.
D	--	Depot can remove, replace, and use the item.

Fourth Position. The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

NOTE

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Maintenance Code		Application/Explanation
O	--	Unit/AVUM is the lowest level that can do complete repair of the item.
F	--	Direct support/AVIM is the lowest level that can do complete repair of the item.
H	--	General support is the lowest level that can do complete repair of the item.
L	--	Specialized repair activity is the lowest level that can do complete repair of the item.
D	--	Depot is the lowest level that can do complete repair of the item.
Z	--	Nonreparable. No repair is authorized.
B	--	No repair is authorized. No parts or special tools are authorized for maintenance of a "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes		Application/Explanation
Z	--	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR Code.
O	--	Reparable item. When uneconomically reparable, condemn and dispose of the item at the unit level.
F	--	Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support level.
H	--	Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	--	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L	--	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
A	--	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different P/N from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6). This column includes the following information:

1. The federal item name and, when required, a minimum description to identify the item.

2. P/Ns of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.

3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.

4. The statement END OF FIGURE appears just below the last item description in Column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package.

STOCK NUMBER Column. This column lists the NSN in National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN.

NSN
(e.g., 5385-01-574-1476)
NIIN

When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

2. Part Number (P/N) Index Work Package. P/Ns in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

PART NUMBER Column. Indicates the P/N assigned to the item.

FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

SPECIAL INFORMATION

UOC. The UOC appears in the lower left comer of the Description Column heading. Usable on codes are shown as "UOC:.." in the Description Column (justified left) on the first line under the applicable item/ nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

Code	Used On
FFX	Model 90074
ZZZ	Model 91038
-	Model WT2008
G3K	Model GTA-Z60TPW
R3K	Model 3-K-W-O-A/Z

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk material are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in this manual.

Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the NSN / P/N index work packages and the bulk material list in the repair parts list work package.

Illustrations List. The illustrations in this RPSTL contain unit authorized items.

HOW TO LOCATE REPAIR PARTS.

1. When NSNs or P/Ns Are Not Known.

First. Using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second. Find the figure covering the functional group or the subfunctional group to which the item belongs.

Third. Identify the item on the figure and note the number(s).

Fourth. Look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

2. When NSN Is Known.

First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

3. When P/N Is Known.

First. If you have the P/N and not the NSN, look in the PART NUMBER column of the P/N index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

END OF WORK PACKAGE

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

ONION TANK

REPAIR PARTS LIST

1
2 - 8

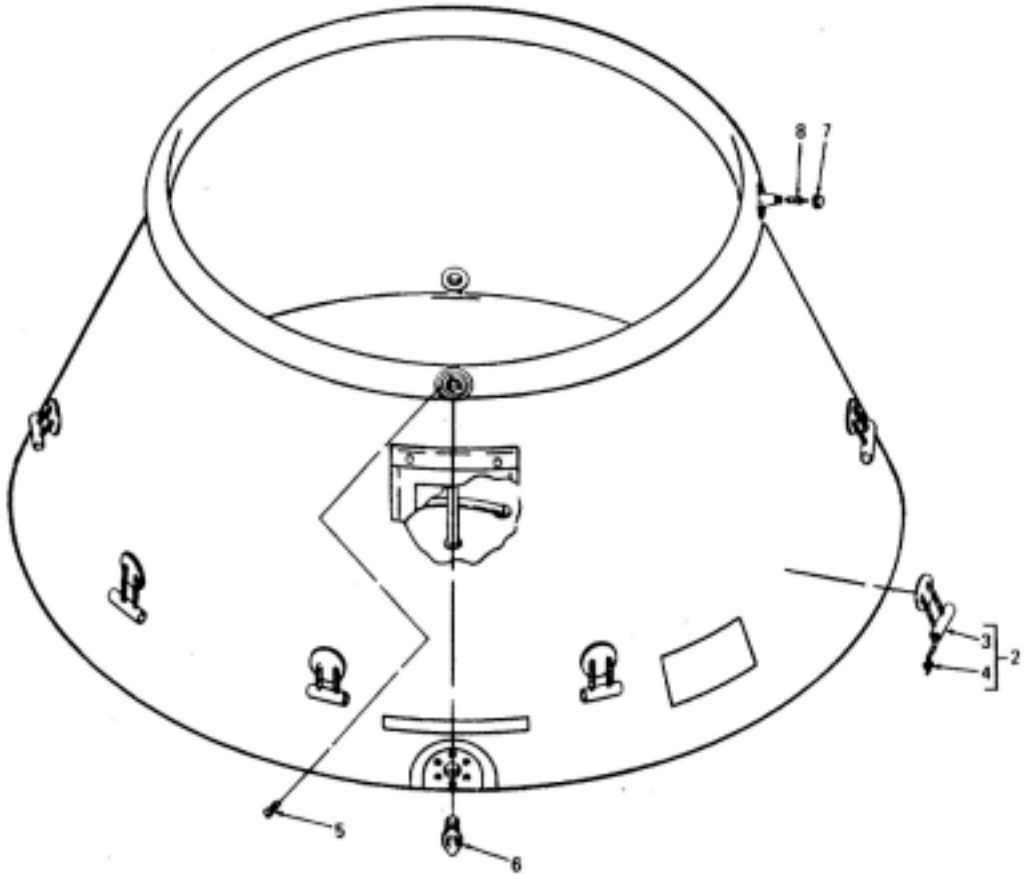


Figure 1. Onion Tank

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 01	
					FIG. 1 ONION TANK	
1	PDOOO		05476	90075	TANK, ONION UOC: FFX, ZZZ	1
2	XAOOO		05476	90033	.HANDLE ASSEMBLY, TOGGEL UOC: FFX, ZZZ	10
3	MOOZZ		05476	90033-4	..PIPE, PLASTIC MAKE FROM P/N 1404 UOC: FFX, ZZZ.....	1
4	MOOZZ		05476	90033-3	..ROPE NYLON MAKE FROM P/N 3828T13 UOC: FFX, ZZZ.....	1
5	PAOZZ	5305-00-059-8235	96906	MS35214-10	.SCREW, MACHINE UOC: FFX, ZZZ.....	1
6	PAOZZ	4220-01-430-7265	96906	MS22054-3	.VALVE, PNEUMATIC INF UOC: FFX, ZZZ.....	1
7	PAOZZ	2640-01-098-2029	27783	660	.CAP, PNEUMATIC VALVE UOC: FFX, ZZZ.....	1
8	PAOZZ	2640-00-060-3543	96906	MS51377-2	.VALVE CORE UOC: FFX, ZZZ.....	1

END OF FIGURE

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

ONION TANK (Model GTA-Z60TPW)

REPAIR PARTS LIST

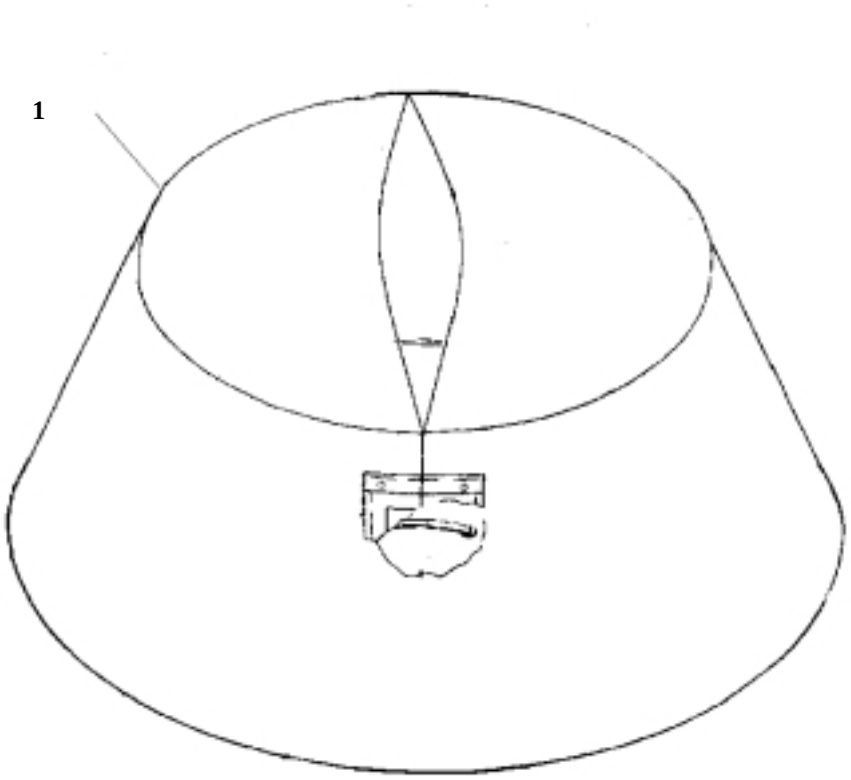


Figure 2. Tank, Self-Supporting; Model GTA-Z60TPW

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 01	
					FIG. 2 TANK, SELF-SUPPORTING	
1	PDOOO		0CBB4	GTA-03-OT/PW-01	TANK, SELF-SUPPORTING, 3,000 GAL. UOC: G3K ……	1
					END OF FIGURE	

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

ONION TANK (3-K-W-O-A/Z)

REPAIR PARTS LIST

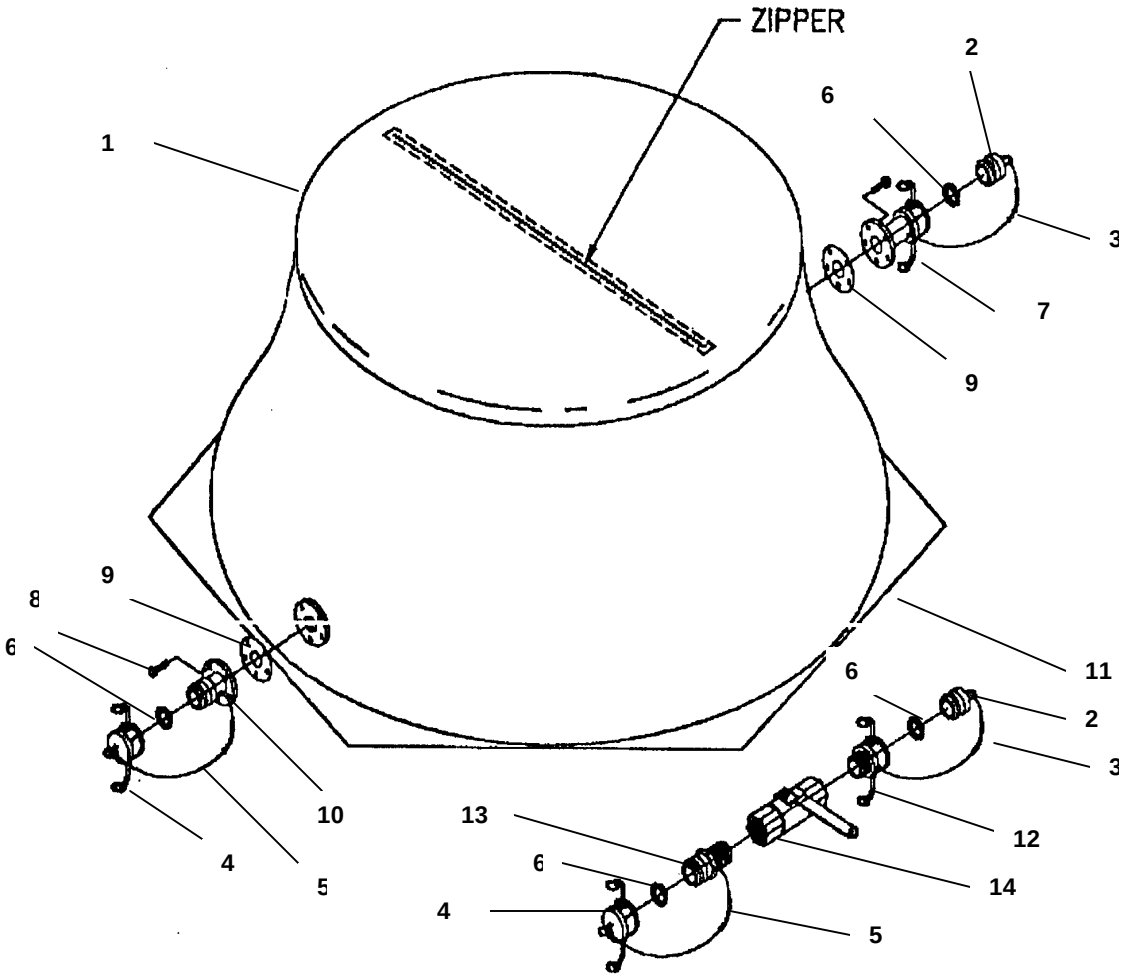


Figure 3. Tank, Onion; Model 3-K-W-O-A/Z

(1)	(2)	(3)	(4)	(5)	(6)	(7)

ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
					GROUP 01	
					FIG. 3 ONION TANK	
1	PDOOO		1DFDO	3-K-W-O-A-Z	TANK, ONION UOC: R3K.....	1
2	PBOZZ	4730-00-915-5127	96906	MS27029-11	PLUG, QUICK DISCONN 2 IN UOC: R3K.....	3
3	MOOZZ		63711	CH80	.CHAIN, 8 IN MAKE FROM P/N 3607T77	1
4	PBOZZ	4730-00-649-9100	96906	MS27028-11	DUST CAP, 2 IN UOC: R3K.....	3
5	MOOZZ		63711	CH80	.CHAIN, 8 IN MAKE FROM P/N 3607T77	1
6	PCOZZ	5330-00-612-2414	96906	MS27030-6	.GASKET, 2 IN	1
7	PBOZZ		10068	00020	FLANGED COUPLER, FEMALE UOC: R3K.....	1
8	PAOZZ		OA6K1	5030	HEX HEAD CAP SCREW UOC: R3K.....	16
9	PCOZZ		1DFDO	9014	GASKET, 3.5 IN UOC: R3K.....	2
10	PBOZZ		10068	00019	FLANGED COUPLER, FEMALE UOC: R3K.....	1
11	XBOZZ		1DFDO	3-K-W-GC/ V-O-A	GROUND CLOTH/VALISE UOC: R3K.....	1
12	PBOZZ	4730-00-938-7997	96906	MS27022-11	COUPLING HALF, QUICK UOC: R3K.....	2
13	PBOZZ	4730-00-088-9285	96906	MS27026-11	COUPLING HALF, QUICK UOC: R3K.....	2
14	XBOZZ		63711	32-108-01	BALL VALVE, 2 IN UOC: R3K.....	2

END OF FIGURE

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

FILL/DISCHARGE FITTINGS

REPAIR PARTS LIST

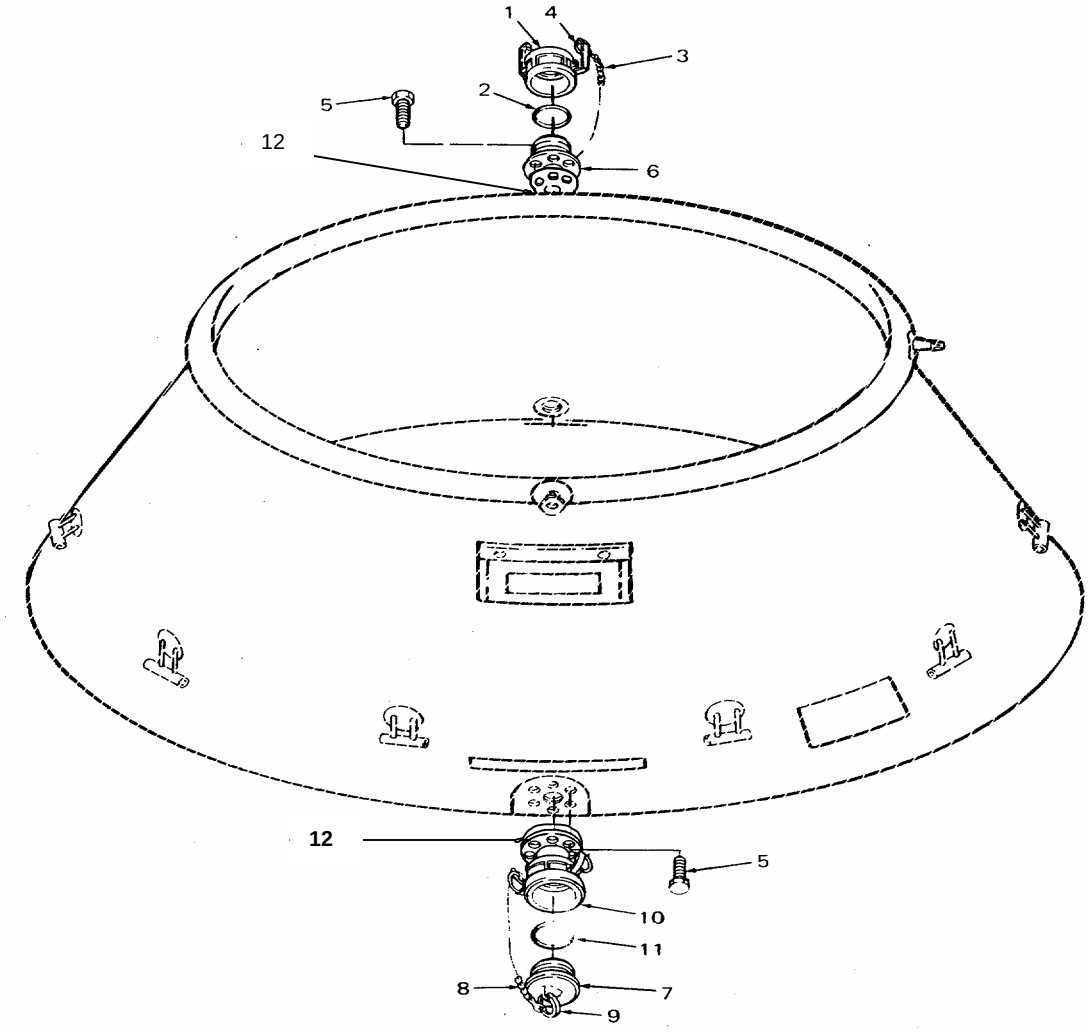


Figure 4. Fill/Discharge Fittings

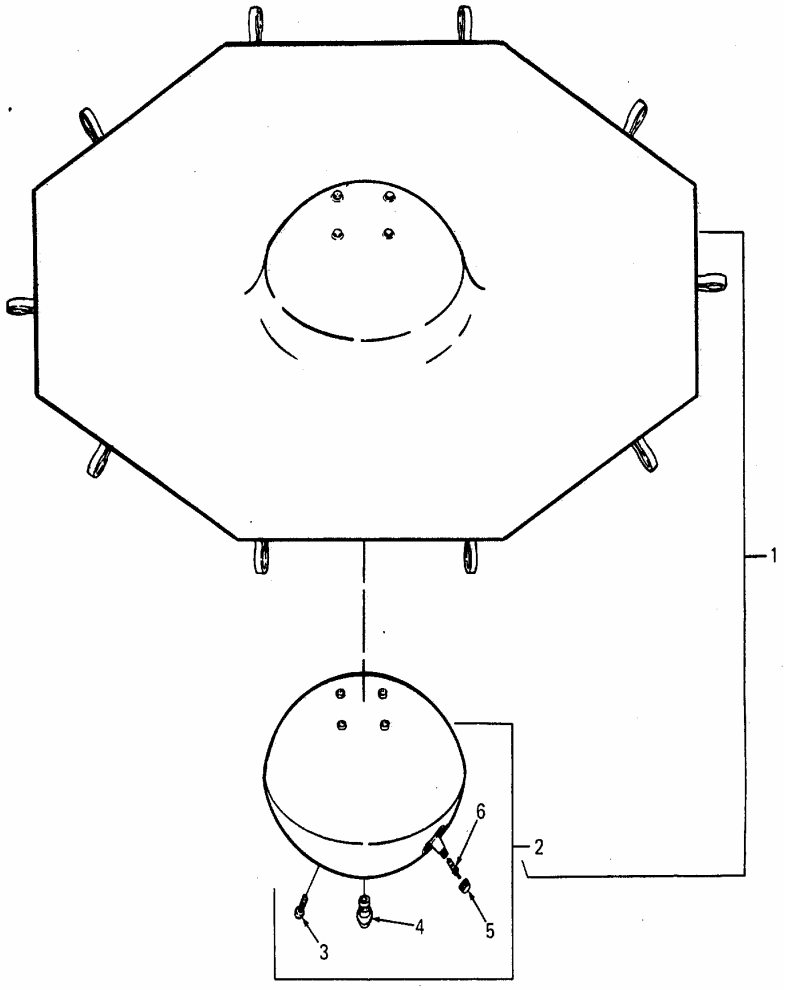
(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 01 FIG. 4 FILL/DISCHARGE FITTINGS	
1	PBOZZ	4730-00-649-9100	96906 10068	MS27028-11	CAP, QUICK DISCONNEC, MARINE CORPS SMR IS PAOOZ	1
2	PCOZZ	5330-00-612-2414	96906 0A6K1	MS27030-6	.GASKET MARINE CORPS SMR IS PAOZZ ……	1
3	MOOZZ		19099	RRC271 TYPE II C	.CHAIN MAKE FROM P/N 838238-00, CUT T0 LENGTH.....	1
4	PAOZZ	5740-01-177-8975	39428	90177A218	.HOLDER, KEY	1
5	PBOZZ	5305-00-071-2241	80204 8J592	MS90725-10 367Z	BOLT HEX HD ¼ IN MARINE CORPS SMR IS PAOZZ	16
6	PBOZZ	4730-01-186-0816	96906	MS27023-11	COUPLING HALF, QUICK MARINE CORPS SMR IS PAOZZ UOC: FFX, G3K	1
6	XDOZZ		05476	90034	COUPLING HALF, QUICK MARINE CORPS SMR IS PAOZZ UOC: ZZZ	1
7	PBOZZ	4730-00-915-5127	96906 10068	MS27029-11	PLUG, QUICK DISCONNEC ..... MARINE CORPS SMR IS PAOOZ	1
8	MOOZZ		19099	RRC271 TYPE II C	.CHAIN MAKE FROM P/N 3607T77, CUT L3 TR35 TO LENGTH	1
9	PAOZZ	5740-01-177-8975	39428	90177A218	.HOLDER, KEY	1
10	PBOZZ	4730-01-186-0818	96906 10068	MS27027-11	COUPLING HALF, QUICK MARINE CORPS SMR IS PAOZZ UOC: FFX, G3K	1
10	XDOZZ		05476	90035	COUPLING HALF, QUICK MARINE CORPS SMR IS PAOZZ UOC: ZZZ	1
11	PCOZZ	5330-00-612-2414	96906	MS27030-6	.GASKET MARINE CORPS SMR IS PAOZZ	1
12	PCOZZ		0CBB4	62069-1	GASKET, FLANGE 4 IN… **END OF FIGURE**	2

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

FLOATING BALL AND COVER VALISE

REPAIR PARTS LIST



NOTE: P/Ns 90032-4 and 90079-1 shown. Others similar.

Figure 5. Floating Ball and Cover Valise

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 02 COVER AND FLOAT	
					FIG. 5 FLOATING BALL AND COVER VALISE	
1	PBOOO	8465-01-438-6039	05476	90032-4	COVER, VALISE FLOAT MARINE CORPS SMR IS PAOZZ UOC: FFX	1
1	XDOZZ		05476	90032-1	COVER, VALISE FLOAT MARINE CORPS SMR IS PAOZZ UOC: ZZZ	1
2	PBOOZ	5430-01-437-9650	05476	90079-1	.BALL, FLOTATION MARINE CORPS SMR IS PAOZZ UOC: FFX.....	1
2	XDOZZ		05476	90032	.BALL, FLOTATION MARINE CORPS SMR IS PAOZZ UOC: ZZZ.....	1
3	PAOZZ	5305-00-059-8235	96906	MS35214-10	..SCREW, MACHINE	1
4	PAOZZ	4220-01-430-7265	96906	MS22054-3	..VALVE, PNEUMATIC IN UOC:	1
5	PAOZZ	2640-01-098-2029	27783	660	..CAP, PNEUMATIC VALVE UOC:	1
6	PAOZZ	2640-00-060-3543	96906	MS51377-2	..VALVE CORE UOC:	1

END OF FIGURE

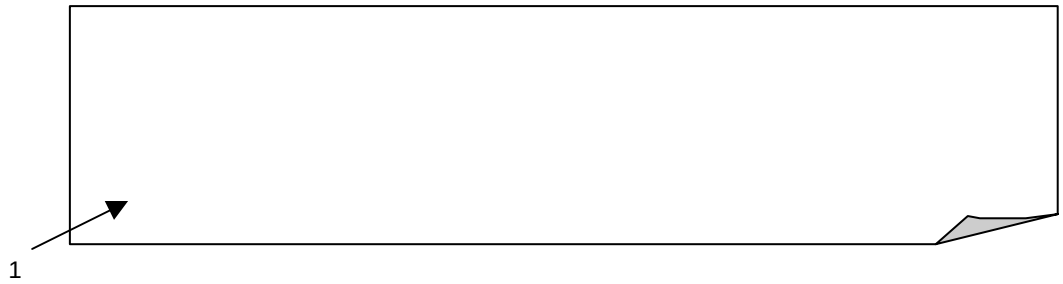


Figure 6. Cover, Model GTA-Z60TPW

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 02 COVER	
					FIG. 6 COVER, MODEL GTA-Z60TPW	
1	PDOOO		0CBB4	GTA-03-OT/PW-02	COVER, SEALABLE	1
					END OF FIGURE	

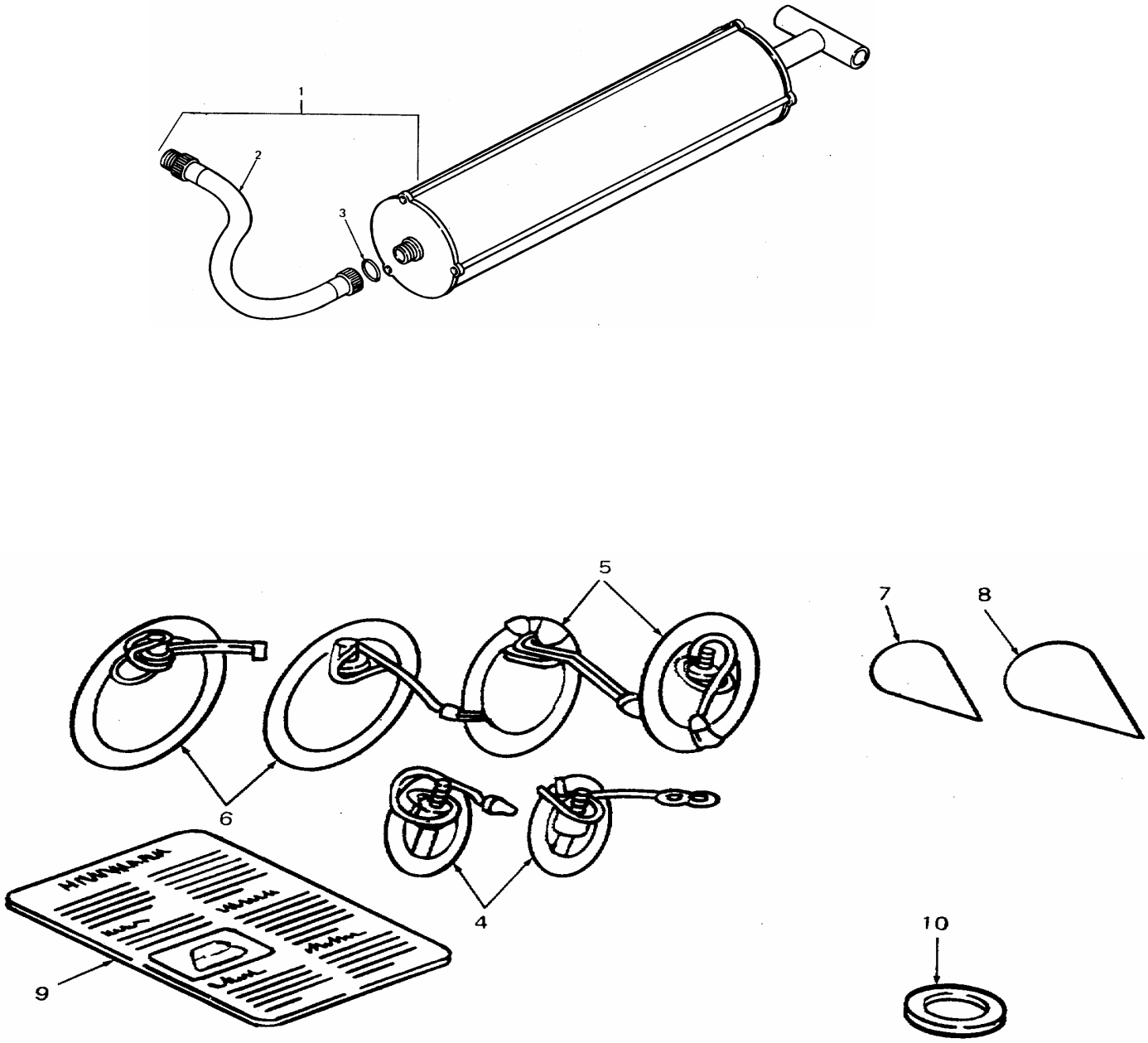


Figure 7. Air Pump and Repair Items

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 03 ACCESSORY ITEMS	
					FIG. 7 AIR PUMP AND REPAIR ITEMS	
1	PBOOO	4320-01-406-4900	77230	1095	PUMP, INFLATING-DEFLA MARINE CORPS SMR IS PAOZZ UOC: FFX	1
2	PBOZZ	4720-01-388-8477	77230	PM6211-4	.HOSE ASSEMBLY, NONME MARINE CORPS SMR IS PAOZZ UOC:	1
3	PBOZZ	5331-00-248-3839	96906	MS9021-111	.O-RING MARINE CORPS SMR IS PAOZZ UOC:	1
4	PAOZZ	5340-00-720-8864	81336	13202E2870-1	PATCH, MECHANICAL, FL UOC:	4
5	PAOZZ	5340-00-720-8863	81336	13202E2870-2	PATCH, MECHANICAL, FL UOC:	2
6	PAOZZ	5340-00-720-8858	81336	13202E2870-3	PATCH, MECHANICAL,FL UOC:	2
7	PAOZZ	5510-00-255-9493	97403	13211E3085	PLUG, WOOD 3 IN UOC:	2
8	PAOZZ	5510-00-255-9492	97403	13211E3084	PLUG, 5 1N UOC:	2
9	XBOZZ	7610-01-122-3771	81349	M52255FIG6	SHEET, TECHNICAL UOC:	2
10	PCOZZ	5330-00-612-2414	96906	MS27030-6	GASKET MARINE CORPS SMR IS PAOZZ UOC:	2

END OF FIGURE

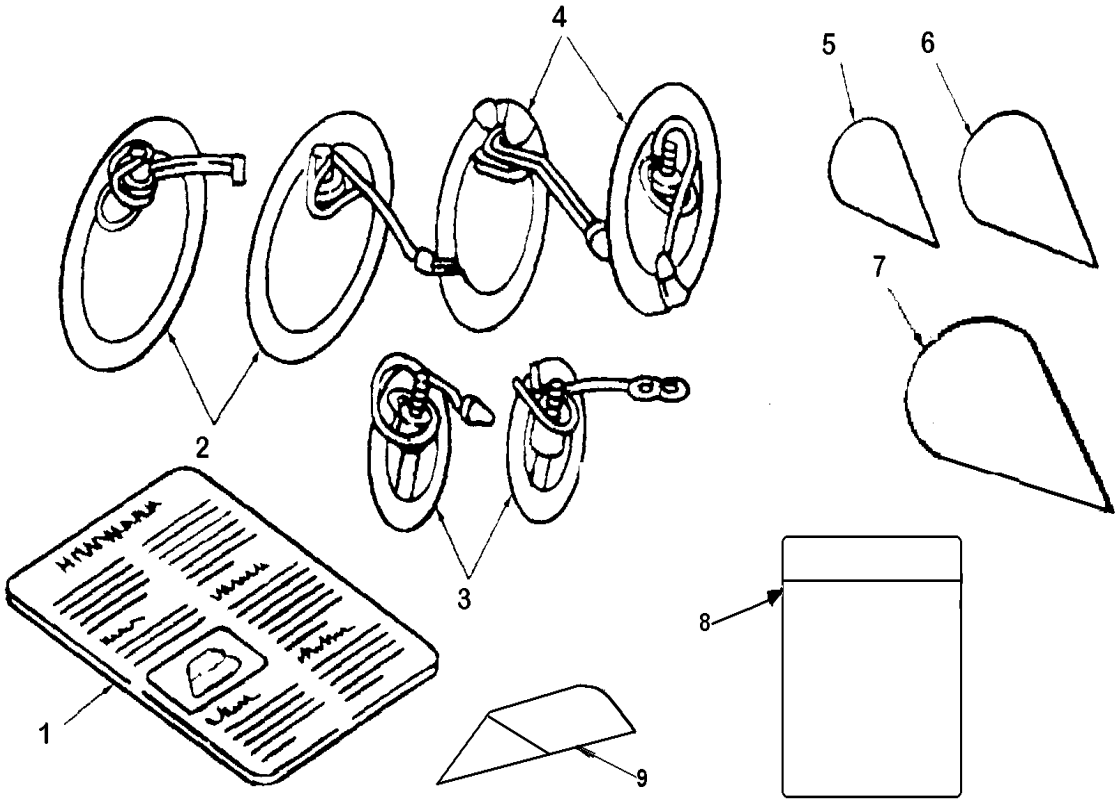


Figure 8. Repair Items, for GTA-Z60TPW

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 03 ACCESSORY ITEMS	
					FIG. 8 REPAIR ITEMS, GTA-Z60TPW	
1	XBOZZ		84583	52255-005	INSTRUCTIONS LAMINA……	1
2	PAOZZ	5430-00-720-8858	81336	13202E2870-3	PATCH MECHANICAL, 7 ½ IN……..	2
3	PAOZZ	5430-00-720-8863	81336	13202E2870-2	PATCH, MECHANICAL 5 IN……	1
4	PAOZZ	5430-00-720-8864	81336	13202E2870-1	PATCH MECHANICAL, 3 IN……	1
5	PAOZZ	5510-00-255-9434	97403	13211E3085	PLUG, WOOD, 3 IN……	1
6	PAOZZ		84583	52255-003	PLUG, WOOD, 4 ½ IN……..	1
7	PAOZZ	5510-00-255-9492	97403	13211E3084	PLUG, WOOD, 5 IN……	1
8	PAOZZ		84583	52255-001	CONTAINER……	1
9	PAOZZ		84583	52255	RAZOR/KNIFE……	1

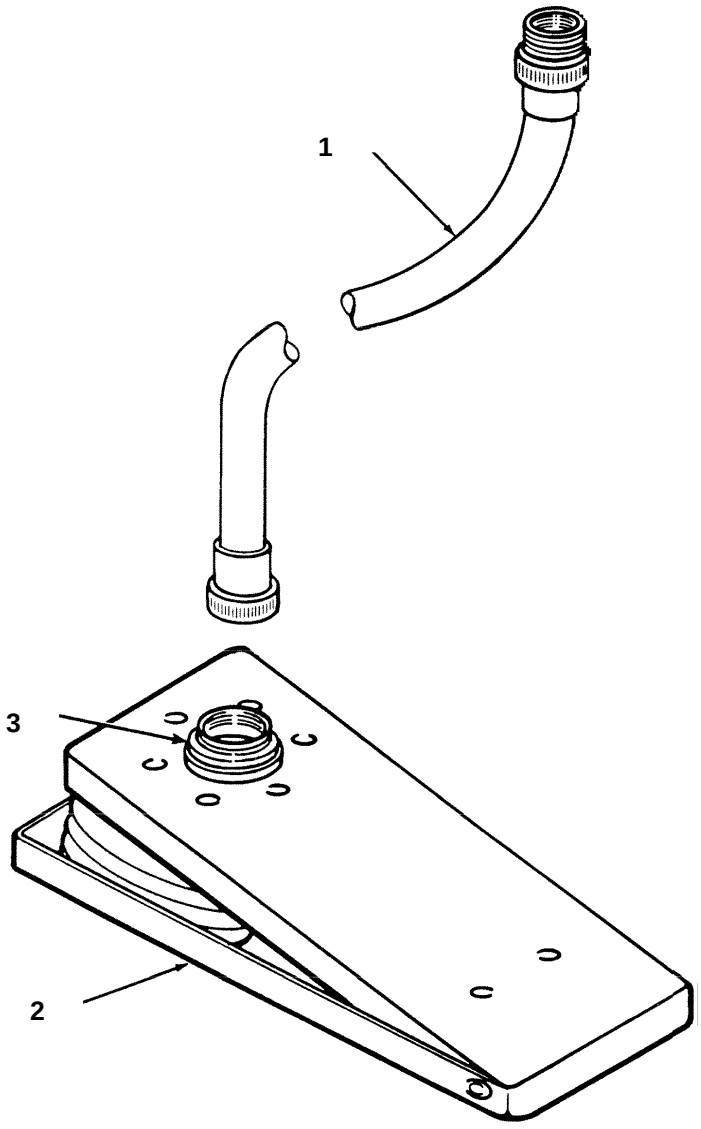
END OF FIGURE

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

FOOT BELLOWS

REPAIR PARTS LIST



NOTE: Models 91038 & WT2008

Figure 9. Foot Bellows

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 03 ACCESSORY ITEMS	
					FIG. 9 FOOT BELLOWS	
1	PBOZZ	4720-01-388-8477	77230	PM6211-4	HOSE ASSEMBLY, NONMETA UOC: ZZZ.....	1
2	PBOZZ	4320-01-397-7318	77230	PM6211	PUMP, INFLATING, MANUAL UOC: ZZZ.....	1
3	PBOZZ	5331-00-248-3839	96906	MS29513-111	O-RING UOC: ZZZ.....	1

END OF FIGURE

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 04 BULK ITEMS	
					GROUP 04 BULK MATERIAL	
1	PAOZZ	4010-00-228-9933	32345	838238-00	CHAIN WELDLESS UOC:	V
2	PAOZZ	4710-01-063-6002	27286	1404	PIPE, PLASTIC UOC:	V
3	PAOZZ	4020-01-275-6973	39428	3828T13	ROPE, FIBROUS UOC:	V
					END OF FIGURE	

UNIT MAINTENANCE

COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS

SPECIAL TOOL

REPAIR PARTS LIST

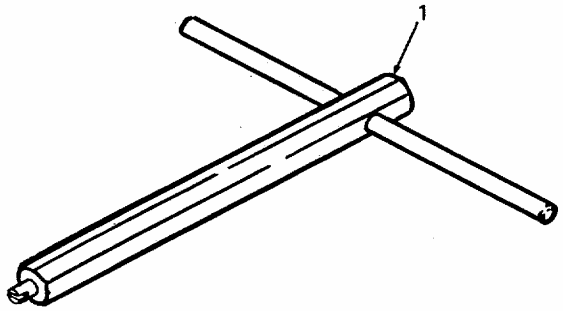


Figure 10. Special Tool

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 05 SPECIAL TOOLS	
					FIG. 10	
1	PBOZZ	5120-00-308-3809	27789	3522	REPAIR TOOL, PNEUMATIC MARINE CORPS SMR IS PAOZZ UOC: FFX, ZZZ, WT2008.....	1
	PAOZZ	5120-00-293-0392	81349	MIL-S-45179	STICHER, CEMENTING & VULC UOC: WT2008 ……	1

END OF FIGURE

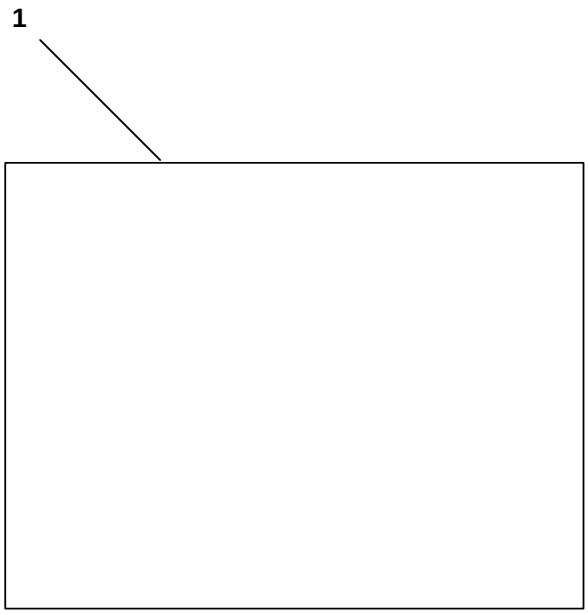


Figure 11. Ground Cloth/Valise (Model GTA-Z60TPW)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 06 GROUND CLOTH/VALISE	
					FIG. 11 GROUND CLOTH/VALISE	
1	PDOOO		OCBB4	GTA-03-OT/PW-03	GROUND CLOTH/VALISE……	1
					END OF FIGURE	

This repair parts list authorizes spares and repair parts for performance of Operator and Unit level maintenance of the 3000 Gallon, Water, Self-supporting, Fabric Tank, Model WT2008. Components are not illustrated.

Miscellaneous Components of Tank

Seaming Tape
Cloth, coated, polychloroprene on nylon
Pattern No. 9066A (30mm), Specification UK/SC/3964 MFC 00349

Floor/Wall Sealing Strip
Cloth, coated, polychloroprene on nylon (102mm wide)
Pattern No. 8177A, Specification UK/SC/3972 MFC 00350

Float Retaining Bag
Netting, camouflage, fiber desert polyester raschel
Pattern No. 8055A, Specification UK/SC/4418 MFC N00375

Valise
Cloth canvas flax, olive drab, RR and WR
Pattern No. T8071D to DEF. STAN. 83-38 MFC F00627

Webbings
Nylon webbing, 50 mm (2 in.), dyed to color 298 (olive drab) of BS381C
Pattern No. 9352A, Specification UK/SC/3652 MFC W00460
Nylon webbing, 19 mm (o.75 in.), Type B Schedule 3 of Specification
DTD 829A, scoured, heat set and dyed to color 298 (olive
drab) of BS38IC MFC W00463

Cordage
Plaited cord, polyester multifilament yarn with core, minimum number
of strands 16, dia. 2.75 mm. Breaking load 160kg
Color 285 (NATO Green) of BS381C MFC C00578

Sewing Thread
Polyester/cotton continuous filament polyester core
Pattern No. 9349B (12 & 20), Specification UK/SC/3625 MFC T00771

Inflation Valves
Type A1/2N/3H/4BR/7K, 2 oz. valve moulding to
Dwg. M.E.X.E./A/12963 MFC V00666

Valve, Pneumatic Tire NSN: 2640-00-052-0851
Schrader P/N 15R CAGEC: 27783 MFC V00669

Deflation Plug
Assembly No. W.K.A31952 (Walter Kidde Co. Ltd.) MFC V00670

Wood Toggles, Fasteners
To Dwg. No. A1389 MFC W00511
Stud. GJ4 00550 00 000 MFC S00301
Post GJ4 00550 00 000A MFC S00302
Socket GJ4 00548 00 000 MFC S00303
Cap GJ4 00670 00 000 MFC S00304
Finish, nickel plate, black to DEF. STAN. 53-47

Eyelets
Metallic with washers 2A/2/2B to DEF. STAN. 53-22 MFC E00420

Buckles
Sliding knurled bar 50 mm to Dwg. No. A1641 MFC B00652

Male Outlet
2 in. N.P.S.H. water tank, w/cap and chain brass finish
P/N 2711-00-1-1-34-501 MFC H00713

Female Outlet
2 in. N.P.S.H. water tank, w/cap and chain brass finish
P/N 2711-00-1-1-34-502 MFC H00714

Reinforcing Pad
P/N 97403-13201 E9441

Assembly Screws
FED. STD. H28 screw cap hex HD 0.25-28 UNF x 0.625L and
0.25-28 UNF x 0.75L

UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK,
WATER STORAGE, 3000 GALLONS
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
2640-00-052-0851	(Model WT2008)				
5305-00-059-8235	1	5			
	3	3			
2640-00-060-3543	1	8			
	3	6			
5305-00-068-0509	2	5			
5305-00-071-2241	4	5			
4010-00-229-9933	4	3			
5331-00-248-3839	4	3			
	5	3			
5510-00-255-9492	4	8			
5510-00-255-9493	4	7			
4010-00-228-9933	BULK	1			
5120-00-293-0392	6				
5120-00-308-3809	6	1			
5330-00-612-2414	4	2			
	4	11			
	7	10			
4730-00-649-9100	4	1			
5340-00-720-8858	7	6			
5340-00-720-8863	7	5			
5340-00-720-8864	7	4			
4730-00-915-5127	4	7			
4710-01-063-6002	BULK	2			
2640-01-098-2029	1	7			
	3	5			
7610-01-122-3771	4	9			
5740-01-177-8975	4	4			
	4	9			
4730-01-186-0816	4	6			
4730-01-186-0818	4	10			
4020-01-275-6973	BULK	3			
4720-01-388-8477	4	2			
	5	1			
4320-01-397-7318	9	2			
4320-01-406-4900	4	1			
5430-01-437-9650	3	2			
8465-01-438-6039	3	1			

UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK,
WATER STORAGE, 3000 GALLONS
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
CH80	3	3
	3	5
GTA-03-OT/PW-01	2	1
GTA-03-OT/PW-02	6	1
GTA-03-OT/PW-03	11	1
MS22054-3	1	6
	5	4
MS27022-11	3	12
MS27023-11	4	6
MS27027-11	4	10
MS27028-11	4	1
	3	4
MS27029-11	4	7
	3	2
MS27030-6	4	2
	2	11
	7	10
	3	6
MS29513-111	7	3
	9	3
MS35214-10	1	5
	5	3
MS51377-2	1	8
	5	6
	9	3
MS90725-10	4	5
M52255FIG6	7	9
PM6211-4	7	2
	9	1
RCF5003		
RRC271 TYPE II C	4	3
1095	7	1
L3 TR35	4	8
00019	3	10
00020	3	7
13202E2870-1	7	4
13202E2870-2	7	5
13202E2870-3	7	6
13211E3084	7	8
1321153085	7	7
1404	BULK	2
15R	(Model WT 2008)	
3-K-W-O-A-Z	3	1
3-K-W-GC/V-O-A	3	11
32-108-01	3	14
3522	10	1
367Z	4	5
3828T13	BULK	3
52255-002	8	5
52255-003	8	6
52255-004	8	7
52255-005	8	1
5030	3	8
52255	8	9
52255-001	8	8
62069-1	3	12
6211-6	9	2
660	1	7
	5	5
838238-00	BULK	1
8858	8	2
8863	8	3
8864	8	4
90032	5	2
90032-1	5	1
90032-4	5	1
90033	1	2
90033-3	1	4
90033-4	1	3
90034	4	6
90035	2	10
90075	1	1
90079-1	5	2
9014	3	9
90177A218	4	4
	2	9
90075	1	1

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

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

This work package lists COEI and BII for the collapsible fabric water tank 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 collapsible fabric water tank. 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 collapsible fabric water tank in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the collapsible fabric water tank 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 TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1), Illus Number, gives you the number of the item illustrated.

Column (2), National Stock Number, identifies the stock number of the item to be used for requisitioning purposes.

Column (3), Description, CAGEC, and Part Number, identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (commercial and Government entity code) (in parentheses) and the part number.

Column (4), Usable on Code, gives you a code if the item you need is not the same for different models of equipment. These codes are identified below:

Code	Used On
FFX	Model 90074
ZZZ	Model 91038
-	Model WT2008
G3K	Model GTA-Z60TPW
R3K	Model 3-K-W-O-A/Z

Column (5), U/M (unit of measure), indicates how the item is issued for the National Stock Number shown in column (2).

Column (6) Qty Rqr, indicates the quantity required.

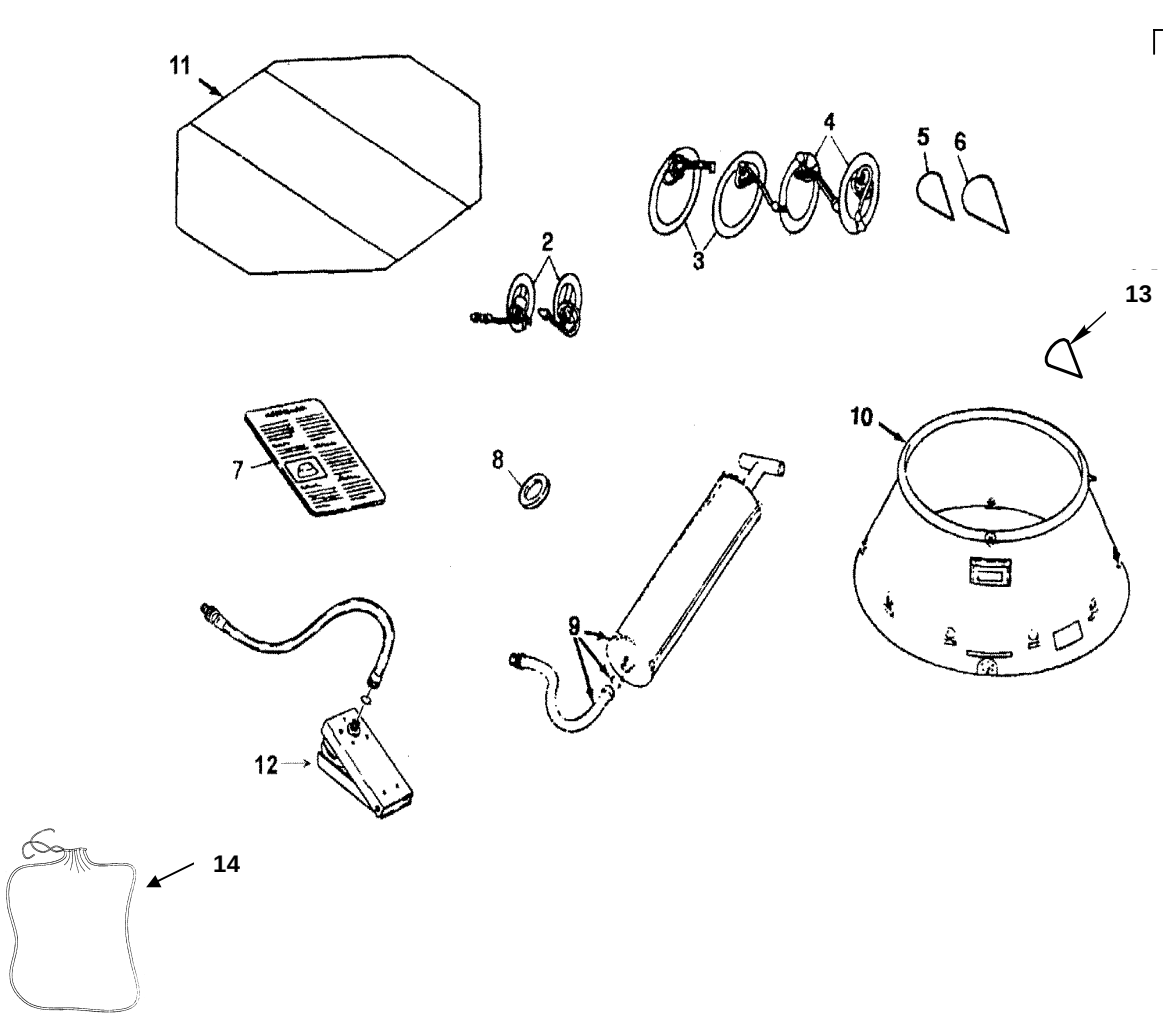


Table 1. Components of End Item List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
1	8110-00-856-6244	REPAIR KIT, COLLAPS Consisting of:		EA	1
2	5430-00-720-8864	.PATCH, MECHANICAL, FLEXIBLE, 3 IN (81336)13202E2870-1		EA	4
3	5430-00-720-8863	.PATCH, MECHANICAL, FLEXIBLE, 5 IN (81336)13202E2870-2		EA	2
4	5430-00-720-8858	.PATCH, MECHANICAL, FLEXIBLE, 7.5 IN (81336)13202E2870-3		EA	2

Table 1. Components of End Item List. (cont.)

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
5	5510-00-255-9493	.PLUG, WOOD, 3 IN (97403)13211 E3085		EA	3
6	5510-00-255-9492	.PLUG, WOOD, 5 IN (97403)13211 E3084		EA	2
7	7610-01-122-3771	.SHEET, TECHNICAL (81349) M52255FIG6		EA	1
8	5330-00-612-2414	.GASKET (96906) MS27030-6		EA	2
9	4320-01-406-4900	PUMP, INFLATING-DEFL (77230) 1095	FFX	EA	1
10	5430-01-359-4774	TANK, FABRIC, COLLAP 3000 GALLON (05476) 90074	FFX	EA	1
	5430-01-318-9434	TANK, FABRIC, COLLAP 3000 GALLON (05476) 91038	ZZZ	EA	1
11	5430-01-316-5715	CLOTH, GROUND (81349) MIL-T-53048		EA	1
		CLOTH, GROUND (1DFDO) 3-K-W-GC/V-O-A	R3K	EA	1
12	4320-01-397-7318	PUMP, INFLATING, MANUAL (77230) PM6211	ZZZ	EA	1
13		PLUG, WOOD (RCF-3-K-W-O-A)	R3K	EA	3
14		PROTECTOR, BALL VALVE (1DFDO) 8016	R3K	EA	1

MODEL WT2008:

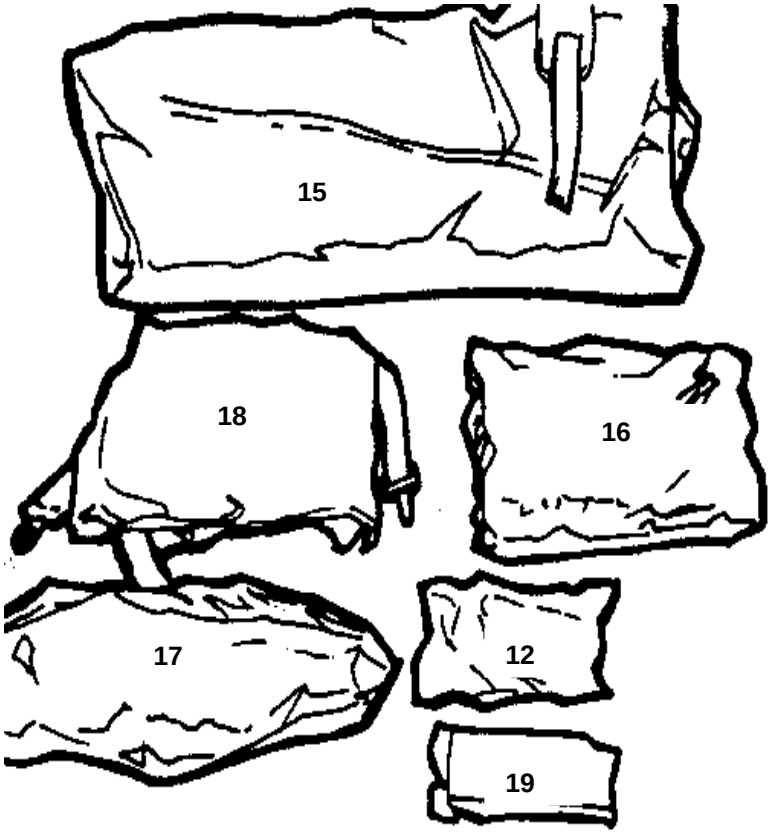


Table 1. Components of End Item List. (cont.)

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
15	5430-01-170-6984	TANK, FABRIC, COLLAP Water, 3000 Gallon	(WT2008)	EA	1
16	5430-99-120-8019	COVER, TANK, FABRIC, Collapsible, Water 3000 Gallon		EA	1
17	5430-99-120-8020	COVER, FLOAT, TANK, FABRIC Collapsible, Water 3000 Gallon		EA	1
18	5430-99-120-8021	VALISE, TANK, FABRIC, COLLAP Water, 3000 Gallon		EA	1

Table 1. Components of End Item List. (cont.)

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
19	5430-99-120-8022	KIT, REPAIR Consisting of:	(WT2008)	EA	1
		.REPAIR FABRIC 40” x 9” U.K.S.C. 3467/3648 Pattern No. 8177A/8087A MFC00347/8		EA	1
		.PATCHES 6” DIA. U.K.S.C. 3467/3648 Pattern No. 8177A/8087A MFC00347/8		EA	3
		.PATCHES 3” DIA. U.K.S.C. 3467/3648 Pattern No. 8177A/8087A MFC00347/8		EA	3
		.EMERY CLOTH, GRADE 1, 9” x 11” MFC00789		EA	1
		.ADHESIVE TUBES Bostic 1 GA-186 MFC00792		EA	8
	5430-00-720-8864	.PATCH, MECHANICAL, 3 IN		EA	4
	5430-00-720-8863	.PATCH, MECHANICAL, 5 IN		EA	2
	5430-00-720-8858	.PATCH, MECHANICAL, 7.5 IN		EA	2
	5510-00-255-9493	.PLUG, WOOD, 3 IN		EA	2
	5510-00-255-9492	.PLUG, WOOD, 5 IN		EA	2
		.HAND ROLLER MFC00790		EA	1
		.SCISSORS MFC00791		EA	1

MODEL GTA-Z60TPW &
MODEL 3-K-W-O-A/Z:

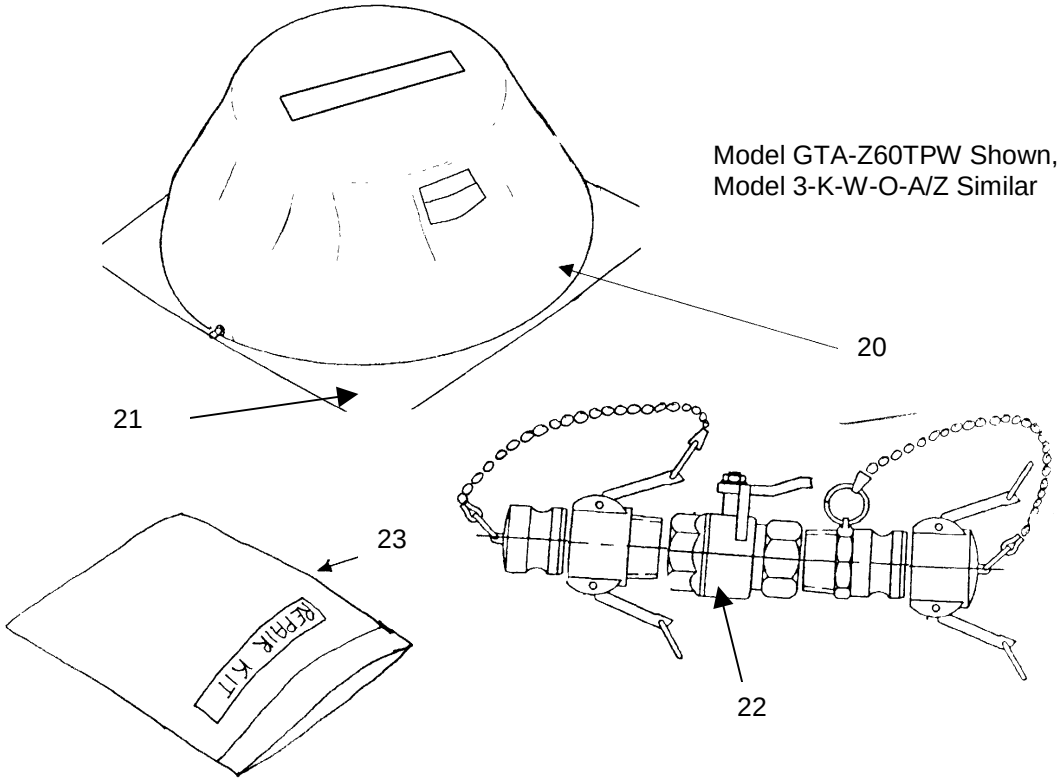


Table 1. Components of End Item List. (cont.)

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
20	5430-01-469-8744	TANK, FABRIC, 3000 GAL (OCBB4) GTA-Z60TPW	G3K	EA	1
20	5430-01-316-5715	TANK, FABRIC, 3000 GAL (1DFDO) 3-K-W-O-A/Z	R3K	EA	1
21		GROUND CLOTH/VALISE (OCBB4) GTA-03-OT/PW-03	G3K	EA	1
22		BALL VALVE ASSY., 2 IN (OCBB4) GTA/2BVA	G3K	EA	2
22		BALL VALVE, 2 IN (63711) 32-108-01	R3K	EA	2
23		REPAIR KIT, TYPE II, TANK Fabric, Collapsible per (84583) PD-52255	G3K	EA	1

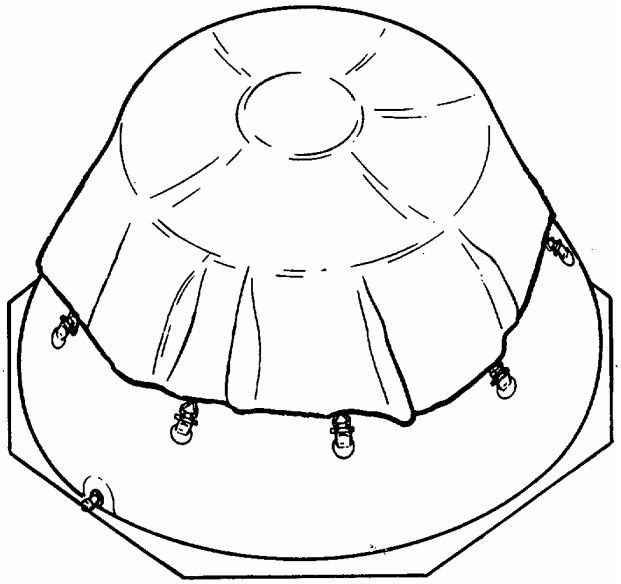
ARMY TM 10-5430-237-12&P
AIR FORCE TO 35E31-3-4-1
MARINE CORPS TM 01034E-12&P/1

TECHNICAL MANUAL

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

TANK, FABRIC, COLLAPSIBLE; AIR COLUMN SUPPORTED,
OPEN TOP, WATER STORAGE, 3,000 GALLONS
MODEL 90074 (EIC = ZFV)/MODEL 91038/ MODEL WT2008 (EIC = ZIZ)
(NSN 5430-01-359-4774)/(NSN 5430-01-318-9434)/(NSN 5430-01-170-6984)

TANK, FABRIC, COLLAPSIBLE, SELF-SUPPORTING,
SEALED TOP, WATER STORAGE, 3,000 GALLONS
MODEL GTA-Z60TPW/MODEL 3-K-W-O-A /Z
(NSN 5430-01-469-8744)/(NSN 5430-01-470-7380)



This manual supersedes TM 10-5430-233-12&P dated 29 October 1993, TM 5-5430-227-12&P dated 30 June 1989 and TM 10-5430-225-12&P dated 18 August 1988 including all changes.
DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited

HEADQUARTERS, DEPARTMENT OF THE ARMY AND
AIR FORCE AND HEADQUARTERS, U.S. MARINE CORPS

15 AUGUST 2000

Table 2. Basic Issue Items List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
1		TECHNICAL MANUAL, Operator's and Unit Maintenance ARMY TM 10-5430-237-12&P AIR FORCE TO 35E31-3-4-1 MARINE CORPS TM 01034E-12&P/1		EA	1

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
EXPENDABLE AND DURABLE ITEMS LIST

EXPENDABLE AND DURABLE ITEMS LIST

This work package lists expendable and durable items that you will need to operate and maintain the collapsible fabric water tank. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-790, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanations of Columns in the Expendable/Durable Items List

Column (1) - Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., "Use lubricating oil (Item 25, WP 5230 00).").

Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item (C=Operator/Crew).

Column (3) - National Stock Number. This is the NSN assigned to the item which you can use to requisition it.

Column (4) - Item Name, Description, Commercial and Government Entity Code (CAGE), and Part Number (P/N). This column provides the other information you need to identify the item.

Column (5) - Unit of Measure (U/M). This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

EXPENDABLE AND DURABLE ITEMS LIST

Table 1. Expendable and Durable Items List.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGE, PART NUMBER	(5) U/M
1	C	7930-01-306-8369	Cleaning Compound, Solvent-Detergent (1Z575) P/N 13005	gl
2	C	7920-00-205-1711	Rags, Wiping, Cotton Synthetic (58536) A-A-531	bu
3	C	5430-01-359-1078	Repair Kit, Collapsible Fabric Tank and Drums (ROCTAD), components listed in WP 0029 00 (OF6E1) BOV-USA-1	ea
4	C	7930-00-880-4454	Dishwashing Compound, Hand (81348) P-D-410	gl
5	C	8110-00-856-6244	Repair Kit, Collapsible Drum Up to 3/8 in (81349) MIL-R-52255	ea
6	C	7930-00-240-7174	Brush, Scrub (81349) HB1490-5	ea

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
ILLUSTRATED LIST OF MANUFACTURED ITEMS

ILLUSTRATED LIST OF MANUFACTURED ITEMS

This work package provides information required to fabricate or manufacture components of the tank.

Contents

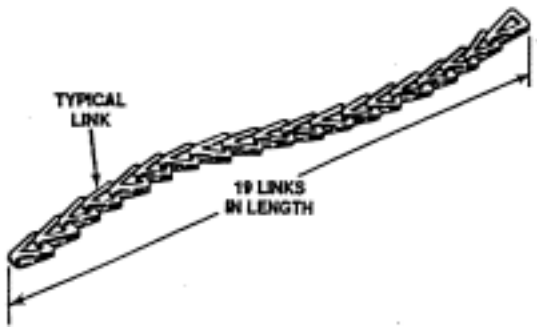
This work package includes complete instructions for making items authorized to be manufactured or fabricated at unit maintenance level.

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

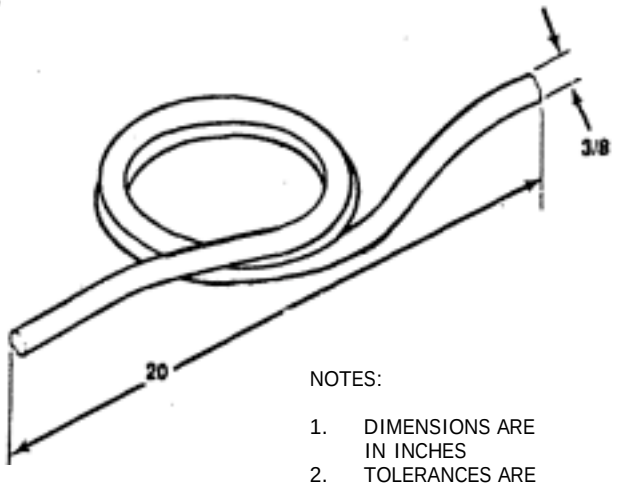
MANUFACTURED ITEMS PART NUMBER INDEX

PART NO.	FIGURE NO.
CH80	3
RRC271 Type E CL3TR35	2
90033-3	1
90033-4	1



MATERIAL	
DESCRIPTION	**NSN**
CHAIN, WELDLESS, RRC271 (81348)	4010-00-228-9933

1. Chain

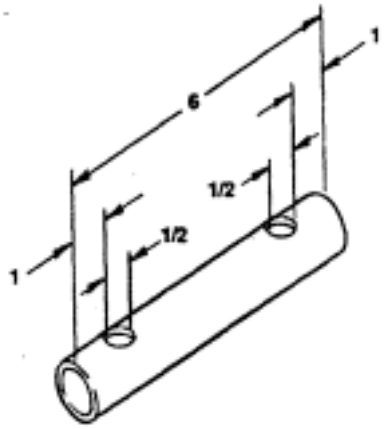


NOTES:

1. DIMENSIONS ARE IN INCHES
2. TOLERANCES ARE 1/64 INCH

MATERIAL	
DESCRIPTION	**NSN**
ROPE, FIBROUS, NYLON (39428) 3828T13	4020-01-275-6973

2. Nylon Rope



NOTES:

1. DIMENSIONS ARE IN INCHES
2. TOLERANCES ARE 1/64 INCH

MATERIAL	
DESCRIPTION	**NSN**
PIPE, PLASTIC POLYVINYL CHLORIDE (PVC), PE3408, SDR11, 1 INCH, WHITE UV RESISTANT	4710-01-063-6002

3. Polyvinyl Chloride (PVC) Pipe.

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
TORQUE LIMITS

TORQUE LIMITS

This work package provides general torque limits for fasteners. Special torque values are indicated in the maintenance procedures for applicable components. The general torque values given in this work package shall be used when specific torque values are not indicated in the maintenance procedures.

Torque Limits

Torque limits are listed in Table 1 for fasteners. Dry fasteners are defined as fasteners on which no lubricants are applied to the threads. Wet fasteners are defined as fasteners on which graphite or moly-disulphide greases or other extreme pressure lubricants are applied to the threads. Table 2 lists the minimum breakaway torque values for locknuts.

Table 1. General Torque Requirements for Dry Fasteners*

	Torque Requirement in lb ft (N·m)			
Bolt/Screw Size	**SAE Grade 1 or 2**	**SAE Grade 5**	**SAE Grade 6 or 7**	**SAE Grade 8**
1/4-20 UNC	5 (7)	8 (11)	10 (14)	12 (16)
1/4-28 UNF	7 (8)	10 (14)	12 (16)	14 (19)
5/16-18 UNC	11 (15)	17 (23)	19 (26)	24 (33)
5/16-24 UNF	13 (18)	19 (26)	23 (31)	27 (37)
3/8-16 UNC	18 (24)	31 (42)	34 (46)	44 (60)
3/8-24 UNF	20 (27)	35 (47)	42 (57)	49 (66)
7/16-14 UNC	28 (38)	49 (66)	55 (75)	70 (95)
7/16-20 UNF	30 (41)	55 (75)	67 (91)	78 (106)
1/2-13 UNC	39 (53)	75 (102)	85 (115)	105 (142)
1/2-20 UNF	41 (56)	85 (115)	102 (138)	120 (163)
9/16-12 UNC	51 (69)	110 (149)	120 (163)	155 (210)
9/16-18 UNF	55 (75)	120 (163)	145 (197)	170 (231)
5/8-11 UNC	63 (85)	150 (203)	167 (226)	210 (285)
5/8-18 UNF	95 (129)	170 (231)	205 (278)	240 (325)
3/4-10 UNC	105 (142)	270 (366)	280 (380)	375 (509)
3/4-16 UNF	115 (156)	295 (400)	357 (484)	420 (570)
7/8-9 UNC	160 (217)	395 (536)	440 (597)	605 (820)
7/8-14 UNF	175 (237)	435 (590)	555 (753)	675 (915)
1-8 UNC	235 (319)	590 (800)	660 (895)	910 (1234)
1-14 UNF	250 (339)	660 (865)	825 (1119)	999 (1342)
1-1/8-7 UNC	350 (475)	800 (1085)	1000 (1356)	1280 (1736)
1-1/8-12 UNF	400 (542)	880 (1193)	1050 (1424)	1440 (1953)
1-1/4-7 UNC	500 (678)	1080 (1464)	1325 (1797)	1820 (2468)
1-1/4-12 UNF	550 (746)	1125 (1526)	1325 (1797)	1820 (2712)
1-3/8-6 UNC	660 (895)	1460 (1980)	1800 (2441)	2380 (3227)
1-3/8-12 UNF	740 (1003)	1680 (2278)	1960 (2658)	2720 (3688)
1-1/2-6 UNC	870 (1180)	1940 (2631)	2913 (3950)	3160 (4285)
1-1/2-12 UNF	980 (1329)	2200 (2983)	3000 (4068)	3560 (4827)

*Torque given is for clean, dry threads. Reduce by 10% when engine oil is used as lubricant.

Table 2. Locknut Breakaway Torque Values

NOTE

To determine breakaway torque, thread locknut onto screw or bolt until at least two threads stick out. Locknut shall not make contact with a mating part. Stop the locknut. Torque necessary to begin turning locknut again is the breakaway torque. Do not reuse locknuts that do not meet minimum breakaway torque.

Thread Size	Minimum Breakaway Torque lb-in.	(N·m)
10-32	2.0	(0.23)
1/4-28	3.5	(0.40)
5/16-24	6.5	(0.73)
3/8-24	9.5	(1.07)
7/16-20	14.0	(1.58)
1/2-20	18.0	(2.03)
9/16-18	24.0	(2.71)
5/8-18	32.0	(3.62)
3/4-16	50.0	(5.65)
7/8-14	70.0	(7.91)
1-12	90.0	(10.17)
1-1/8-12	117.0	(13.22)

END OF WORK PACKAGE

OPERATOR AND UNIT MAINTENANCE
COLLAPSIBLE FABRIC TANK, WATER STORAGE, 3000 GALLONS
MANDATORY REPLACEMENT PARTS LIST

MANDATORY REPLACEMENT PARTS LIST

This work package includes a list of all mandatory replacement parts referenced in the task initial setups and procedures. These are items that must be replaced during maintenance whether they have failed or not. This includes items based on usage intervals such as miles, time, rounds fired, etc.

MANDATORY REPLACEMENT PARTS LIST

Table 1. Mandatory Replacement Parts List

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
1	MS27030-6	5330-00-612-2414	Gasket, 2 in	
2	MS29513-111	5331-00-248-3839	O-Ring	
3	62069-1		Gasket, 4 in Flange	
4	9014		Gasket, 3.5 in Flange	

END OF WORK PACKAGE

GLOSSARY

ABBREVIATIONS

AAL ..... Additional Authorization List
Assy ..... Assembly
BII ..... Basic Issue Items
bu ..... Bundle
°C .....Degree Celsius
CAGEC..... Commercial and Government Entity Code
COEI ..... Components of End Item
EIR .....Equipment Improvement Recommendations
ESC .....Equipment Serviceable Criteria
°F ..... Degree Fahrenheit
Fed ..... Federal
gl ..... Gallon
illus ..... Illustration
MTOE .....Modified Table of Organization and Equipment
MWO ..... Modification Work Order
NSN ..... National Stock Number
PMCS ..... Preventive Maintenance Checks and Services
QA/QC .....Quality Assurance/Quality Control
Qty ..... Quantity
Rqr ..... Required
Spec . ..... Specification
TAMMS.....The Army Maintenance Management System
TMDE .....Test, Measurement, and Diagnostic Equipment
U/M .....Unit of Measure

DEFINITION OF TERMS

A

APPENDIX - A collection of supplementary material at the end of a book.
APPROVED - Permitted to be used for a specific purpose by the person or group who is authorized to grant approval.
ASSEMBLY - A combination of parts that may be taken apart without destruction, which has no application or use of its own but is needed for the completeness of a more complex item with which it is combined, or to which it is attached.

C

COMPONENT - A part or a combination of parts which together accomplish a function.

E

EXPENDABLE - An item that is not repairable and is discarded if damaged.
EXPOSURE - Being in the presence of something, or in contact with something. Skin is exposed to cleaning solvent when the solvent contacts the skin during cleaning operations.

L

LEGIBLE - Capable of being read. A legible nameplate can be read; an illegible plate cannot.

M

MALFUNCTION - Occurs when a unit fails to operate normally.
MANUFACTURER - The company which makes an item or piece of equipment for sale.
MATERIEL - Equipment, apparatus, and supplies of an organization such as an army.

R

RECOMMENDATIONS - Suggestions for change; advice given usually to make an improvement.
REQUIRE - To demand or need.

S

SCOPE - The extent of an activity or concept; the amount of information covered as in a book.
SOLVENT - A liquid that can dissolve another substance.

T

TORQUE - Force around an axis. It produces a rotary or twisting motion, and is measured in foot-pounds (ft-lb) or newton-meters (N• m).

V

VENTILATE - To provide with a source of fresh or uncontaminated air.
VISUAL - Visible; detected by the unaided eye.

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By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0011902

To be distributed in accordance with the initial distribution number (IDN) 000000 requirements for TM 10-5430-237-12&P.

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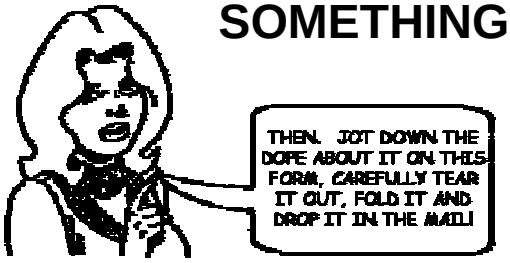

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)
PFC JOHN DOE
Co A, 3d Engineer BN
FT. LEONARDWOOD, MO 63108

DATE SENT

PUBLICATION NUMBER	**PUBLICATION DATE**	**PUBLICATION TITLE**
TM 10-5430-237-12&P	15- Aug - 00	Oper. & Unit Maint Manual, Tank, Fabric, Collap., Water Storage, 3,000 Gallons

BE EXACT PIN-POINT WHERE IT IS

PARA NO	**PARA-GRAPH**	**FIGURE** NO	**TABLE** NO
6	2-1a		
B1		4-3	
125		line 20	

IN THIS SPACE, TELL WHAT IS WRONG
AND WHAT SHOULD BE DONE ABOUT IT:

In line 6 of paragraph 2-1a, the manual states the engine has 6 cylinders. The engine on my vehicle only has 4 cylinders. Change the manual to show 4 cylinders.

Callout number 16 in Figure 4-3 is identifies as a bolt. In key for Figure 4-3, item 16 is called a shim. Please correct. One or the other.

I ordered a gasket, item 19 on Figure b-16 by NSN 2910-00-762-3001. I got a gasket, but it does not fit. Supply says I got what I ordered so the NSN is wrong. Please give me a good NSN.

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER	**SIGN HERE**
JOHN DOE, PFC (268) 317-7111	John Doe

DA FORM 2028-2
1 JUL 79

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DRSTS-M Overprint3, 1 Nov 80

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TEAR ALONG PERFORATED LINE

FILL IN YOUR
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DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

COMMANDER
U.S. TANK-AUTOMOTIVE AND ARMAMENTS COMMAND
ATTN: AMSTA-LC-CIP-WT
ROCK ISLAND, IL 61299-7630

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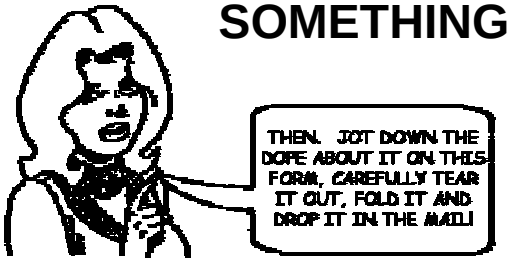

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TM 10-5430-237-12&P	15 – Aug - 00	Oper. & Unit Maint. Manual, Tank, Frabic, Collap., Water Storage, 3,000 Gallons

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PARA	**PARA-GRAPH**	**FIGURE**	**TABLE**
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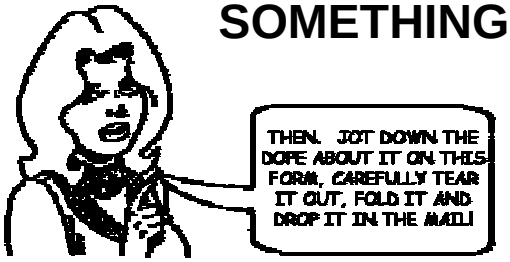

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NO		NO	NO

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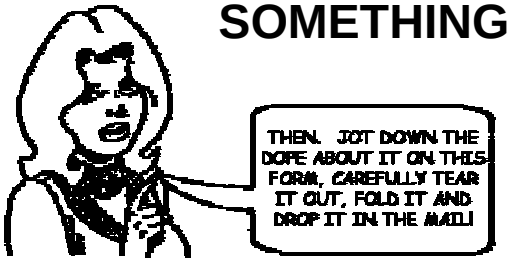

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PARA	**PARA-GRAPH**	**FIGURE**	**TABLE**
NO		NO	NO

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ROCK ISLAND, IL 61299-7630

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however, only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17 and 27.

From: **"Whomever" whomever@avma27.army.mil**
To: **TACOM-TECH-PUBS@ria.army.mil**

Subject: **DA Form 2028**

1. ***From:*** Joe Smith
2. ***Unit:*** home
3. ***Address:*** 4300 Park
4. ***City:*** Hometown
5. ***St:*** MO
6. ***Zip:*** 77777
7. ***Date Sent:*** 19-OCT-93
8. ***Pub no:*** 55-1915-200-10
9. ***Pub Title:*** TM
10. ***Publication Date:*** 11-APR-88
11. ***Change Number:*** 12
12. ***Submitter Rank:*** MSG
13. ***Submitter Fname:*** Joe
14. ***Submitter Mname:*** T
15. ***Submitter Lname:*** Smith
16. ***Submitter Phone:*** 123-123-1234
17. ***Problem:*** 1
18. ***Page:*** 1
19. ***Paragraph:*** 3
20. ***Line:*** 4
21. ***NSN:*** 5
22. ***Reference:*** 6
23. ***Figure:*** 7
24. ***Table:*** 8
25. ***Item:*** 9
26. ***Total:*** 123
27. ***Text:***
    This is the text for the problem below line 27.

The Metric System and Equivalents

Linear Measure

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

Liquid Measure

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

Weights

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

Square Measure

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

Cubic Measure

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

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

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

PIN: 078058-000