

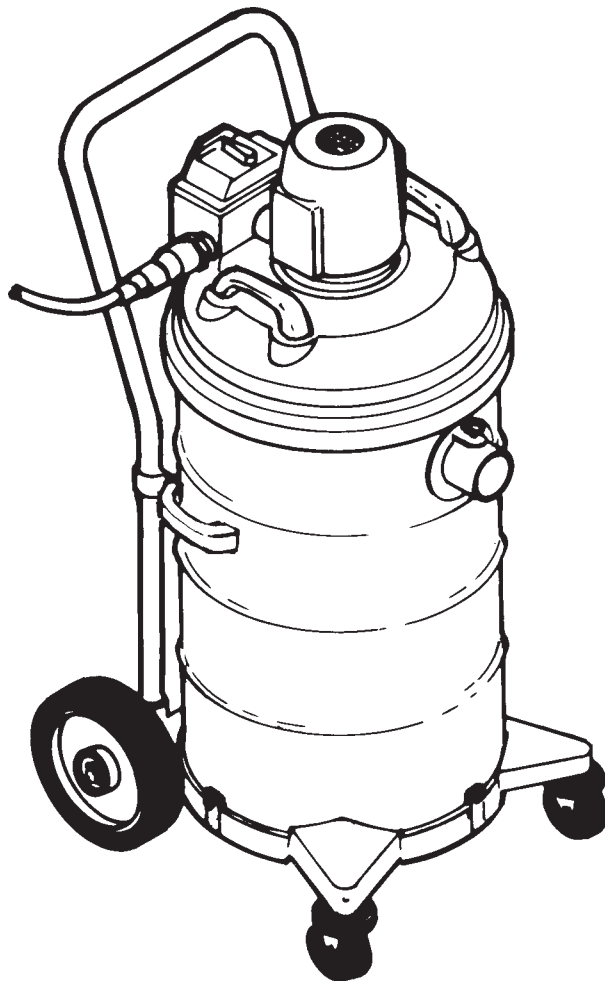
**Explosion Proof/** **Model:**  
**Dust Ignition Proof** **C88015-01, 02, 03, 04**  
**Class I Group D**  
**Class II Group F ,G**

**OPERATION**

**SERVICE**

**PARTS**

**CARE**



Revised 6/02

***Minuteman***<sup>®</sup>

## **INSPECTION**

Carefully unpack and inspect your machine for shipping damage. Each unit is tested and thoroughly inspected before shipment, and any damage is the responsibility of the delivering carrier who should be notified immediately. Read all instructions carefully before operating.

## **CAUTION**

To reduce the risk of ignition of Hazardous Atmospheres. Do not use in Class II, Group F locations that contain electrically conductive dusts.

## **WARNING**

Models C88015-01 and C88015-03 dry pickup only --electric shock could occur if used outdoors or on wet surfaces.

## **WARNING**

Models C88015-02 and C88015-04 wet and dry pickup--to avoid electric shock, use indoors only.

## **DANGER**

This equipment is rated explosion proof and dust ignition proof only in areas listed below:

Class 1, Group D -- Atmospheres containing acetic acid (glacial), acetone, acrylonitrile, ammonia, benzene, butane, 1-butanol (butyl alcohol), 2-butanol (secondary butyl alcohol, n-butyl acetate, isobutyl acetate, sec-butyl alcohol, diisobutylene, ethane, ethanol (ethyl alcohol), ethylacetate, ethyl acrylate (inhibited) ethylene diamine (anhydrous), ethylene dichloride, gasoline, heptanes, hexanes, isoprene, isopropyl ether, mesityl oxide, methane (natural gas), methanol (methyl alcohol), 3-methyl-1-butanol (isoamyl alcohol), methyl ethyl ketone, methyl isobutyl ketone, 2-methyl-1 propanol (isobutyl alcohol), 2-methyl-2-propanol (tertiary butyl alcohol), petroleum naphtha, pyridine, octanes, pentanes, 1-pentanol (amyl alcohol), propane, 1-propanol (propyl alcohol), 2-propanol (isopropyl alcohol), propylene, styrene, toluene, vinyl acetate, vinyl chloride or xylenes.

Group F -- Atmospheres containing carbon black, charcoal, coal or coke dusts which have more than 8 percent total volatile material (carbon black per ASTM D1620, charcoal, coal and coke dusts per ASTM D271) or atmospheres containing these dusts sensitized by other materials so that they present an explosion hazard and having resistivity greater than  $10^2$  OHM -- centimeter but equal to or less than  $10^8$  OHM -- centimeter.

Group G --Atmospheres containing flour, starch, or grain or combustible plastics or chemical dusts having resistivity greater than  $10^8$  OHM -- centimeter.

## **ELECTRICAL**

The machine is designed to operate on 115 volt, 15 amp, 60 hertz AC circuit. This equipment is shipped with approved 3 wire grounded 14-3, 50' STWA power supply cord. No plug is supplied. Plug and wall receptacle should be wired by a qualified electrician in accordance with the National Electrical Code Standards in regard to hazardous locations, i.e. dust and vapor ignition. No extension cords should be used.

## **IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS**

Read all instructions before using:

1. Do not leave unattended when plugged in. Unplug from outlet when not in use and before servicing.
2. Use only for the intended use as described in this manual.

3. **Do not** operate with damaged cord or plug if equipment is not working properly, has been dropped, damaged, exposed to weather, or completely submerged, return it to Hako Minuteman for examination and repair.
4. Vacuum motor has no user serviceable parts and must be returned to the original equipment manufacturer for repair.
5. Do not pull or carry by supply cord, use cord as handle, close a door on cord, or pull cord around sharp edges or corners. Keep cord away from heated surfaces.
6. Do not disconnect plug by pulling on cord. To disconnect from outlet grasp the plug — not the cord.
7. Do not operate without proper static dissipating dust bag or filters in place, nor assemble any other way than as shown in figures 1 through 4.
8. Do not use any attachment that has been changed in any way from its original design. Use no self-designed tools.
9. All lid and tank latches must be engaged before operation.

#### **H.E.P.A. FILTER MODEL VACUUMS C88015-03 AND C88015-04**

Minuteman hazardous-duty critical filter vacuum has been designed to clean up hazardous and toxic dust of all types. A special High Efficiency Particulate Air (H.E.P.A.) filter and a series of “prefilters” used with this vacuum reduce the incidence of airborne dust that would be created by any other method of cleaning.

During the removal of hazardous toxic dust, do not sweep, scoop, shovel or in any manner handle other than vacuuming.

Do not at any time attempt to bypass, remove, substitute or by any other means change the filters recommended for use with this vacuum. Use only approved Hako Minuteman filters and filter bags.

Do not at any time, or in any way, attempt to clean or remove dust particles that may collect or accumulate on the surface of the H.E.P.A. filter media.

Do not reverse or attempt to clean “prefilters” which have accumulated dust for the purpose of reusing them.

Hazardous materials must be disposed of properly. Never throw contaminated debris in your usual trash receptacle. Place debris in a plastic bag or can marked “HAZARDOUS MATERIALS” and take to a hazardous waste handler.

## ASSEMBLY PROCEDURE FOR MODEL C88015-01 DRY ONLY

Follow assembly sequence as shown on page 4, figure 1:

1. Insert cloth filter bag (2), part #800251, into tank (3) using the formed rubber gasket to center it.
2. Place lid assembly (1), part #800250, on top of tank assembly (3) and secure in place by tank lid latches.
3. Insert metal end of grounded neoprene hose, part #800276, into hose intake on tank and tighten thumb screw to secure.
4. Attach tools desired as supplied on page 16.
5. Plug power supply cable into proper electrical outlet. You are now ready to pick up dry materials only. Reverse procedures above to empty.

## ASSEMBLY PROCEDURE FOR MODEL C88015-03 DRY ONLY WITH H.E.P.A. FILTER

Follow assembly sequence as shown on page 4, figure 2:

1. Insert cloth filter bag (4), part #800251, into tank (5) using the formed rubber gasket to center it.
2. Place manometer ring (3) on top of tank assembly (5) and engage tank latches.
3. Place H.E.P.A. filter module (2) on top of tank assembly followed by lid assembly (1) and engage latches.
4. Insert metal end of grounded neoprene hose, part #800276, into hose intake on tank and tighten thumb screw to secure.
5. Attach tools desired as supplied on page 16.
6. Plug power supply cable into proper electrical outlet. You are now ready to pick up hazardous/toxic dry materials only.

Manometer ring assembly (3) will indicate when filters need cleaning or changing. Scale on gauge indicates performance.

## PROCEDURE FOR REMOVING CONTAMINATED FILTER AND FOR CLEANING OF CONTAMINATED TANK OF MODEL C88015-03 DRY ONLY WITH H.E.P.A. FILTER

For the protection of your health, always wear the proper approved or required face mask, gloves and clothing as specified by your Safety Department for your particular application.

1. Unplug machine from power source.
2. Remove vacuum lid/motor assembly with H.E.P.A. filter.
3. Remove impaction prefilter (2), page 9, and place in proper hazardous waste disposal container.
4. Gently remove the cloth filter bag assembly; recommended method of cleaning is by vacuuming with another H.E.P.A. vacuum.
5. Dispose of debris in tank assembly.

**CAUTION:** Hazardous materials, including disposable filters and pre-filters, must be disposed of properly. Never throw contaminated debris in your usual trash receptacle. Place debris in proper containers as recommended by your Safety Department.

All vacuum units should be properly tagged or labeled "HAZARDOUS MATERIAL" and should only be used by authorized, trained personnel.

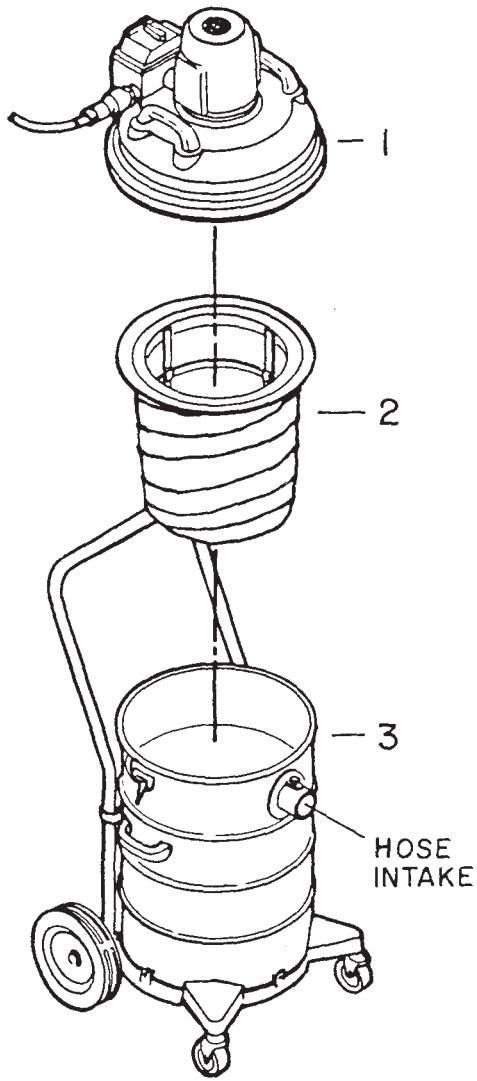


FIG. 1

C88015-01

DRY ONLY

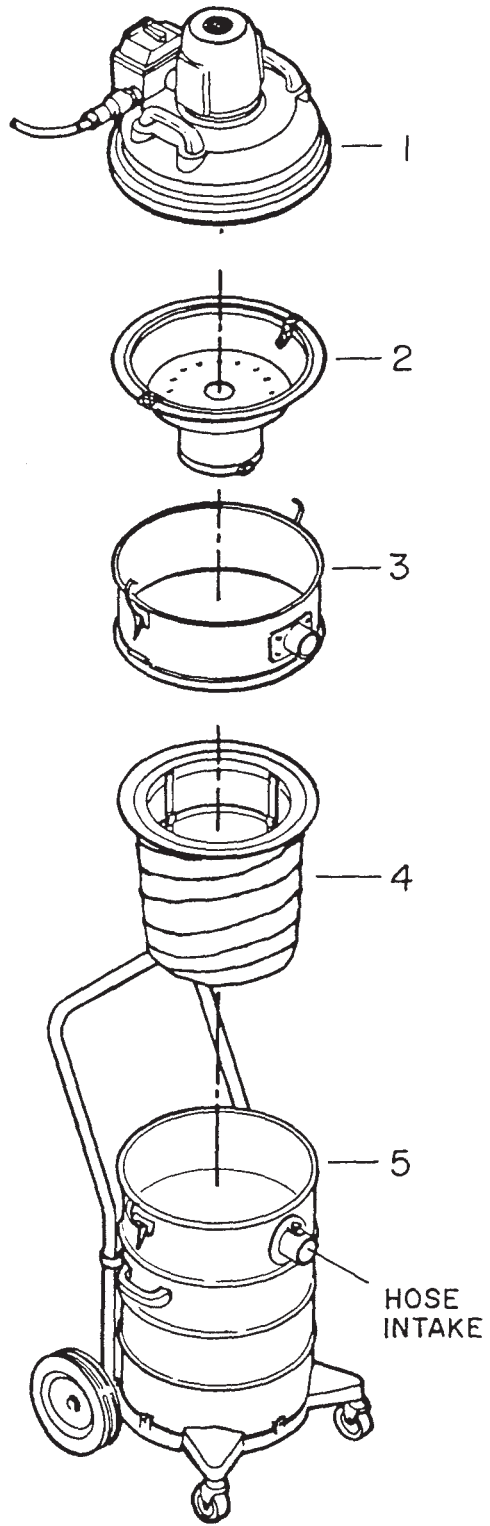


FIG. 2

C88015-03

### **ASSEMBLY PROCEDURE**

Model C88015-02 wet vacuuming only when used for recovery of liquid hazardous materials

(See schematic page 6, fig. 3)

1. Install liquid shut-off assembly (4) into tank assembly centering rubber gasket around rim of tank.
2. Place 1-to-1 adaptor (3) onto tank, center and snap lid latches into place.
3. Place the cloth filter bag (2) onto and into the adaptor using the formed rubber gasket to center it.
4. Position the vacuum lid assembly (1) onto the adaptor making sure that the lid is seated onto the rubber ring of the cloth bag frame completely around the tank. Snap lid latches into place. Liquid shut-off will activate at approximately the 8 gallon level, choking off vacuum.
5. Insert metal end of grounded neoprene hose, part #800276, into hose intake on tank and tighten thumb screw to secure.
6. Attach tools as desired as supplied on page 15.
7. Plug power supply cable in proper electrical outlet. You are now ready to pick up hazardous wet materials.

### **PROCEDURE FOR EMPTYING TANK**

1. Unplug machine from power source.
2. Remove the vacuum lid assembly and place on work table(1).
3. Remove and inspect cloth filter bag for moisture. If bag is wet, allow to dry before reusing or replace with clean, dry filter bag (2).
4. Remove 1-to-1 adaptor (3).
5. Remove shut-off assembly (4).
6. Dispose of liquid waste in accordance with required procedures.
7. If tank assembly is elevated above container receiving waste, tilt tank on rear wheels by lowering carriage handle and dump waste into receiving container.

### **ASSEMBLY PROCEDURE**

Model C88015-04 wet vacuuming only when used for recovery of liquid hazardous/toxic materials

(See schematic page 6, fig. 4)

1. Install liquid shut-off assembly (6) into tank assembly centering rubber gasket around rim of tank.
2. Place 1-to-1 adaptor (5) onto tank, center and snap lid latches into place.
3. Place the cloth filter bag (4) onto and into the adaptor using the formed rubber gasket to center it.
4. Place manometer ring (3) on tank assembly and snap lid latches in place.
5. Place H.E.P.A. filter module (2) on tank, center rubber gasket around rim as shown.
6. Position the vacuum lid assembly (1) onto the adaptor making sure that the lid is seated onto the rubber ring of the cloth bag frame completely around the tank. Snap lid latches into place. Liquid shut-off will activate at approximately the 8 gallon level, choking off vacuum.
7. Insert metal end of grounded neoprene hose, part #800276, into hose intake on tank and tighten thumb screw to secure.
8. Attach tool as desired as supplied on page 15.
9. Plug power supply cable into proper electrical outlet. You are now ready to pick up hazardous/toxic wet materials.

### **PROCEDURE FOR REMOVING CONTAMINATED FILTER AND FOR CLEANING OF CONTAMINATED TANK**

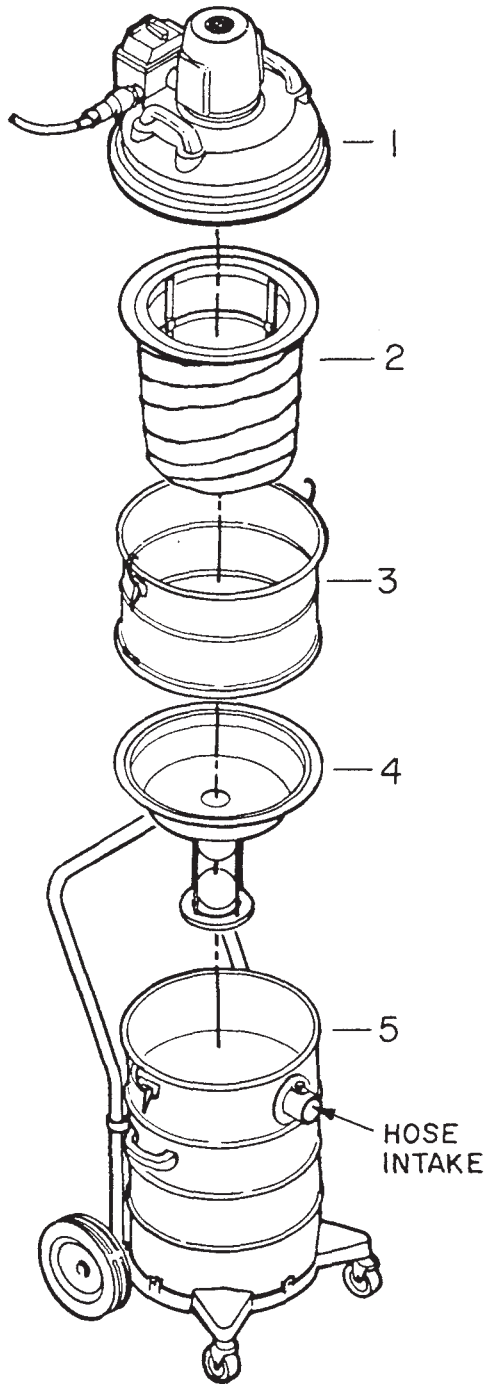
Model C88015-04 when used for recovery of hazardous or toxic materials

For the protection of your health, always wear the proper approved or required face mask, gloves and clothing as specified by your Safety Department for your particular application.

1. Unplug machine from power source.
2. Remove vacuum lid/motor assembly with H.E.P.A. filter.
3. Remove impaction prefilter (2), page 9, and place in proper hazardous waste disposal container.
4. Gently remove the cloth filter bag assembly; recommended method of cleaning is by vacuuming with another H.E.P.A. vacuum.
5. Remove float assembly (6), fig. 4.
6. Dispose of debris in tank assembly.

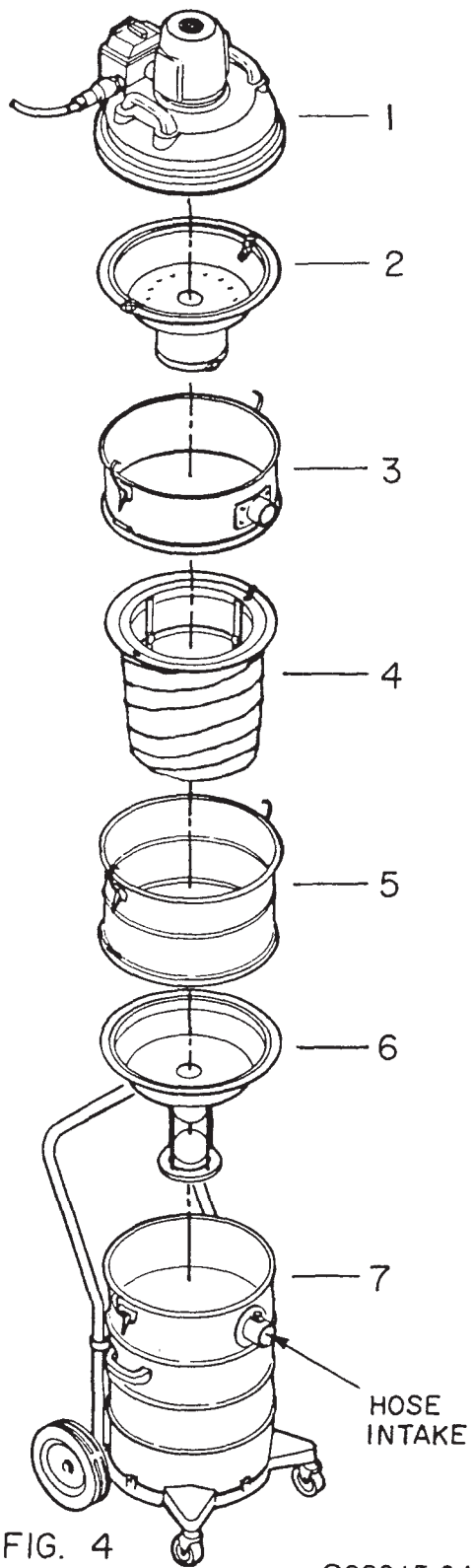
**CAUTION:** Hazardous materials, including disposable filters and prefilters, must be disposed of properly. Never throw contaminated debris in your usual trash receptacle. Place debris in proper containers as recommended by your Safety Department.

All vacuum units should be properly tagged or labeled "HAZARDOUS MATERIAL" and should only be used by authorized, trained personnel.



C88015-02

FIG. 3

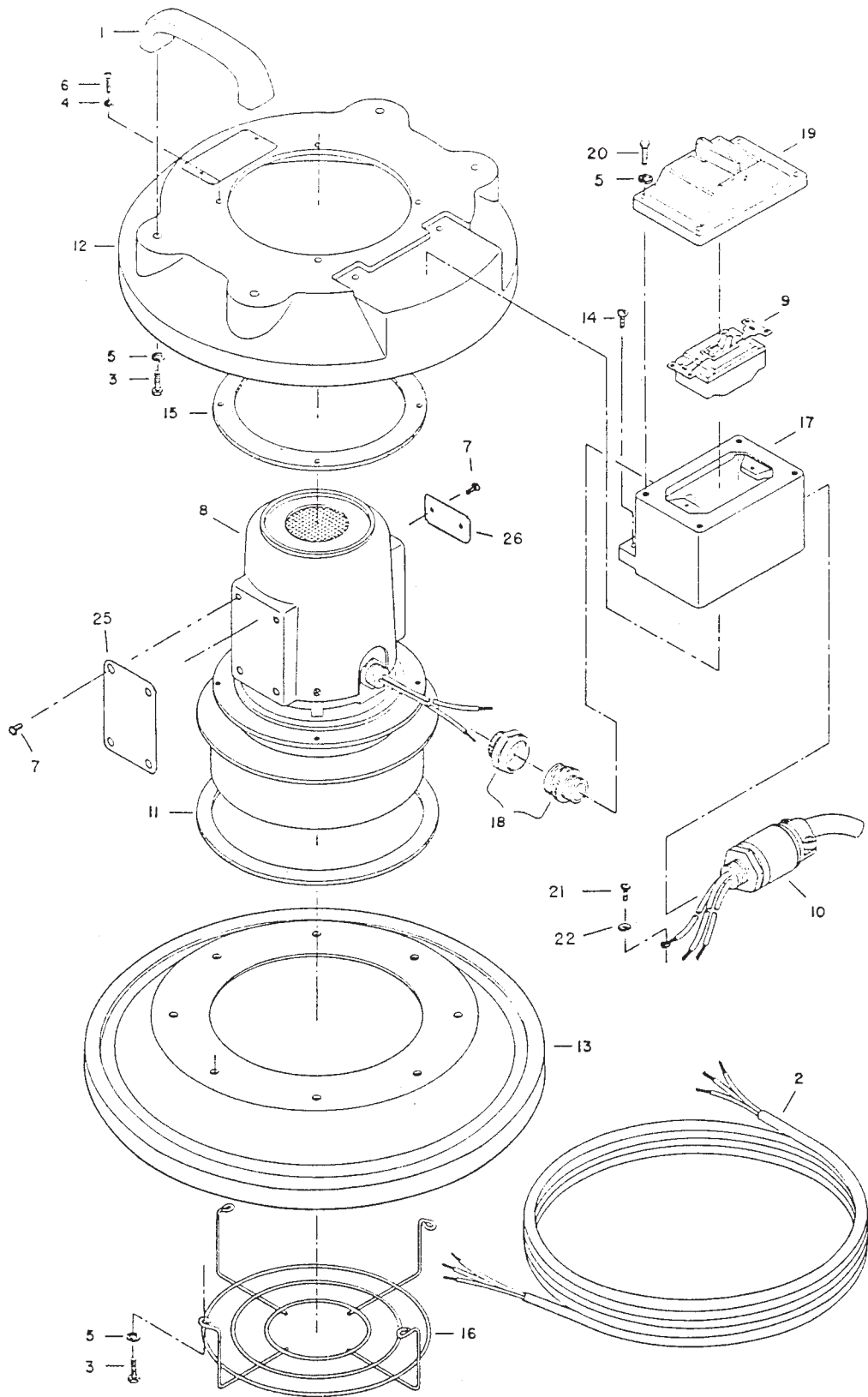


C88015-04

FIG. 4

WET & DRY



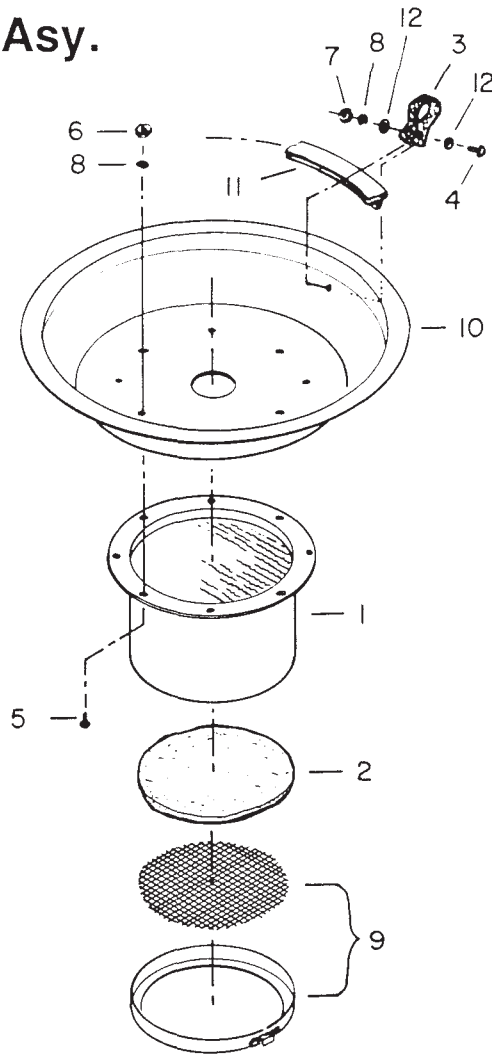




# Parts Listing

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	130040POL	2	Handle, polished
2	150002	1	Orange cord set 14-3 50'
3	712562	6	BLT-HH 1/4-20 x .62
4	712757	4	WSR-Helical #10 SS
5	712758	14	WSR-Helical 1/4 SS
6	712530	4	SCR-MC 10-24 x .62 SS
7	711901	6	Rivet
8	740212	1	Mtr. vac exp. proof 115V
9	740213	1	Switch 20A exp. proof
10	740214	1	Cord conn. exp. proof
11	762141	1	Gasket, 7.50 x 8.87 x .19
12	800245POL	1	Mtr. lid top polished
13	800246POL	1	Mtr. lid bottom polished
14	712546	2	SCR-MC 10-32 x1.00 SS
15	800248	1	Gasket 6.37 x 7.74 x .12
16	800249	1	Wire guard, motor
17	800259MCH	1	Switch box exp. proof
18	800260	1	.50 union exp. proof
19	800261	1	Lid, switch box exp. proof
20	712564	4	BLT-HH 1/4-20 x 1.00 SS
21	710252	1	SCR 10-32
22	711553	1	Lock washer #10
25	715110	1	Warning plate
26	715116		Decal, caution
***	800250		Lid asy. complete

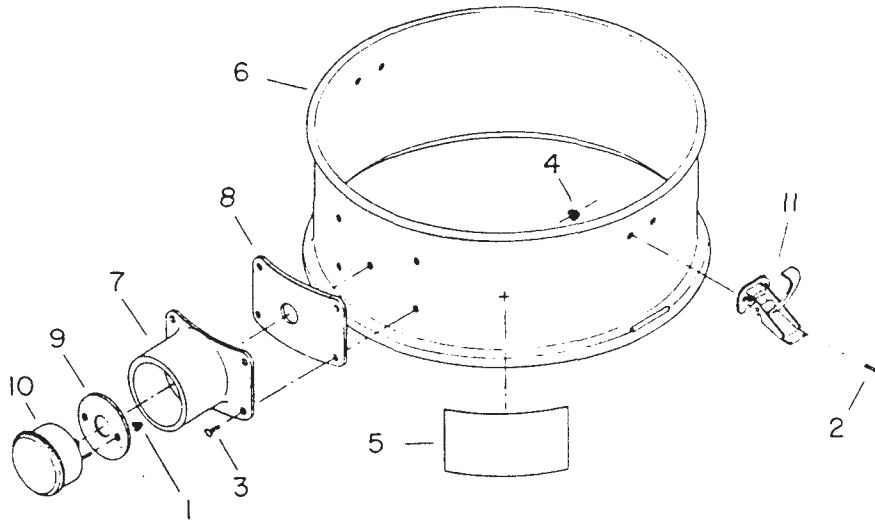
# H.E.P.A. Filter Asy.



## Parts Listing

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	110010	1	HEPA Filter SM Round
2	110121PKG	1	Impact Filter 6.00 Dia.
3	701204	2	Wire, Braided Gmd Strap
4	712530	2	SCR-MC 10-24 x .62 SS
5	712530	8	SCR-MC 10-24 x .62 SS
6	712637	8	Nut-Hex 10-24 SS
7	712635	2	Nut 10-24 SS
8	712757	8	WSR-Helical #10 SS
9	750006	1	Retainer Impact Asy Comp
10	800265	1	HEPA Plate Exp-Proof
11	800273	1	Gasket, Bag Ring Exp
12	712764	2	WSR-#10 SS
***	800266		HEPA Fit Mod Exp-Proof Complete

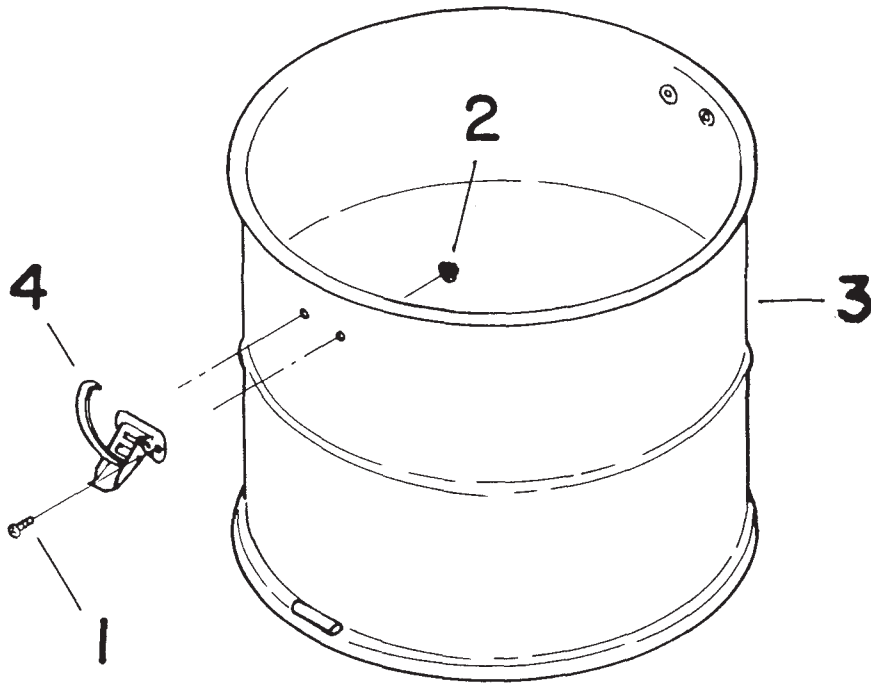
# Manometer



## Parts Listing

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	711427	2	Nut-Flanged Wizz 10-32
2	712534	4	SCR-MC 10-24 x .5
3	712536	4	SCR-MC 10-24 x .62 SS
4	712638	4	Nut-Greer Loc 10-24 SS
5	715077	1	Decal Manometer Ins
6	760096MCH	1	Manometer Ring SS
7	760106MCH	1	Casting Gauge Mount
8	760107	1	Gasket Die Cut Square
9	760108	1	Gasket Die Cut Round
10	760109	1	Gauge Manometer Low
11	800274	2	Latch, Tank Asy Exp
***	800275		Manoring SS W/SS Latches Complete

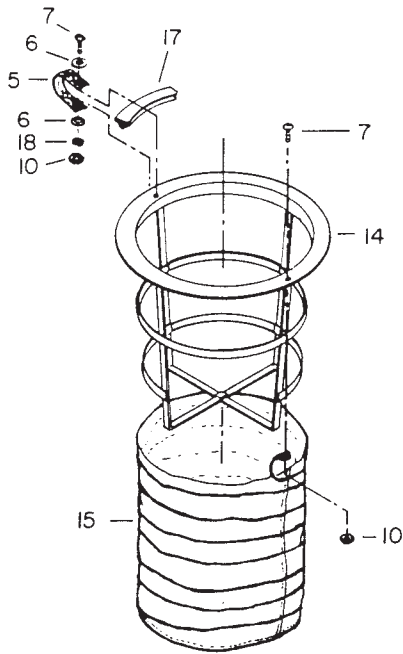
# 1:1 Adaptor



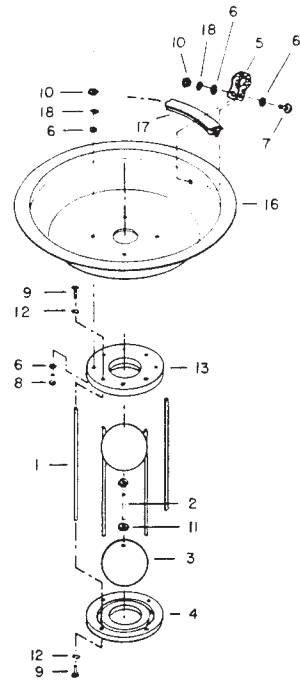
## Parts Listing

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	712534	4	SCR-MC 10-24 x .50 SS
2	712638	4	Nut-Greer Lock 10-24 SS
3	761188POL	1	Adaptor 1:1 SS Polished
4	800274	2	Latch, Tank Asy Exp
***	800278		Adaptor Ring SS Asy Complete

**Conductive Cloth Bag Asy  
800251**



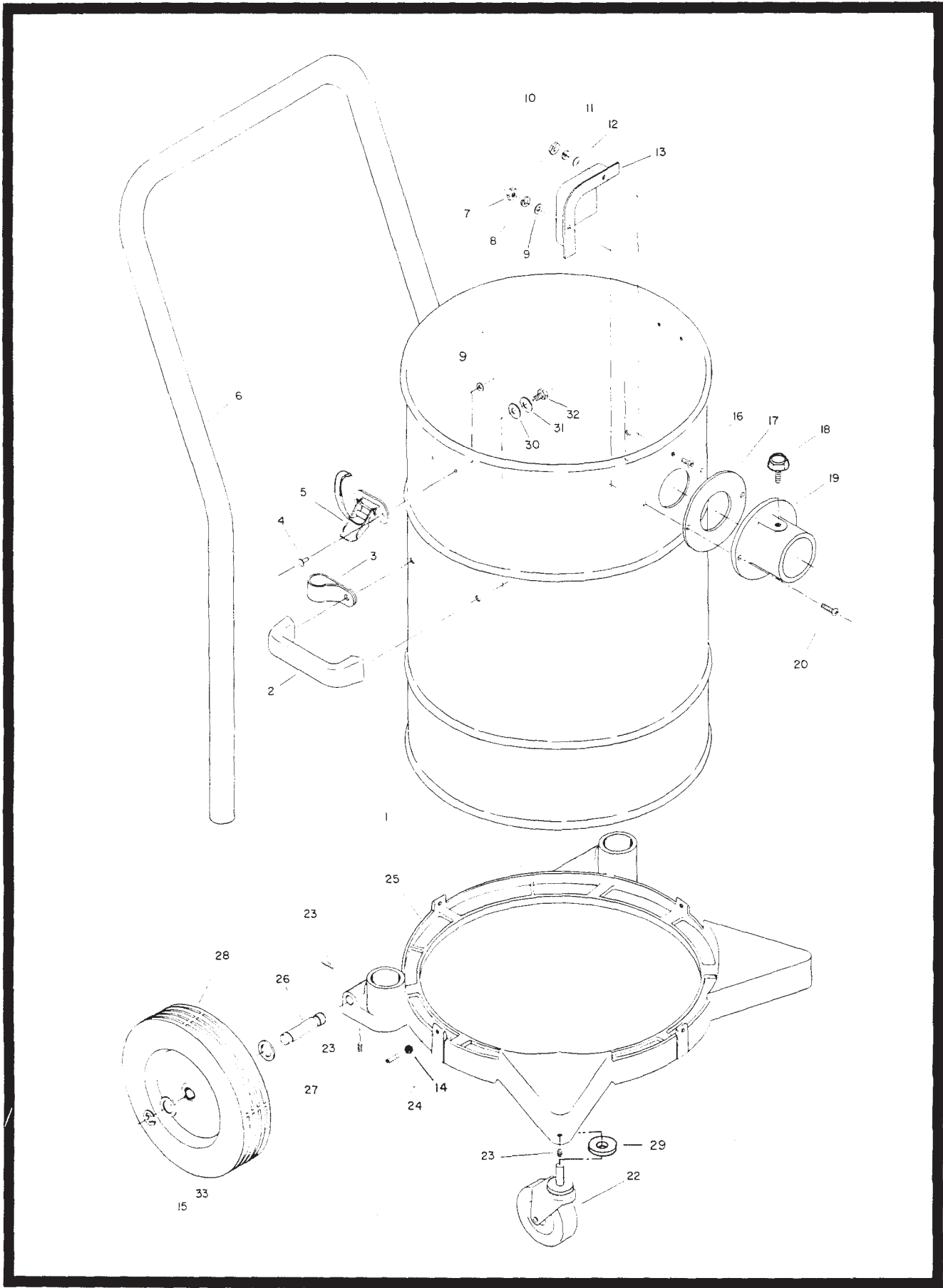
**Float Asy Complete  
800263**



**Parts Listing**

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	701012	4	Rod, Spacer
2	701013	1	Stud
3	701016	2	Ball, Float 4 Dia.
4	701041	1	Plate, End Cap Liquid Shut-off
5	701204	2	Wire, Braided Grnd Strap
6	712764	4	WSR-Flat #10
7	712530	AR	SCR-MC 10-24 x .62 SS
8	712532	AR	SCR-MC 10-24 x 1.00 SS
9	712562	8	BLT-HH 1/4-20 x .75 SS
10	712635	AR	Nut 10-24 SS
11	712665	2	Nut-Hex 1/4-20 SS
12	712758	8	WSR-Helical 1/4 SS
13	750049	1	Plate & Tube Asy Exp
14	750054	1	Wldmnt Bag Frame Exp
15	800252	1	Cloth Bag Conductive
16	800264	1	Shut-off Plate Exp-Proof
17	800273	1	Gasket, Bag Riung Exp
18	712757	1	WSR-Helical #10 SS

AR = as required

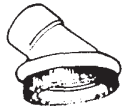


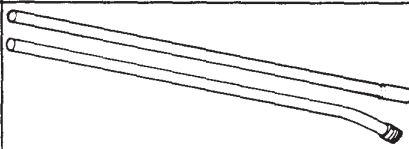



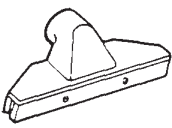
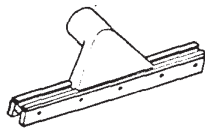
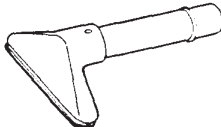
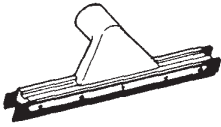


# Parts Listing




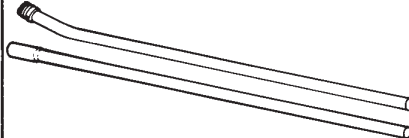
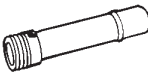


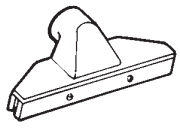
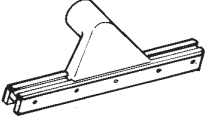
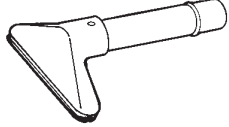
ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	900003POL	1	Tank, Polished 15 gal SS
2	900031POL	2	Handle, Tank Polished
3	800247	2	Clamp, Handle
4	711921	4	Rivet
5	800274	2	Latch, SS
6	800258	1	Handle, SS
7	712637	2	Nut, Hex 10-24 SS
8	712757	2	WSR, Helical SPR LOC #10
9	712764	6	WSR, Flat #10
10	711305	1	Nut, Hex 8-32
11	711552	1	Washer LOC #8
12	711571	1	Washer FLT #8
13	800253 MCH	1	Deflector, Aluminum
14	712665	4	Nut, Hex 1/4-20 SS
15	711713	2	Retaining Ring E Type
16	710530	1	SCR-MC 8/32 x .50
17	900036	1	Gasket
18	750133	1	Knob
19	900112POL	1	Intake, Polished
20	712530	2	SCR-MC 10-32 x .62 SS
22	800254	2	Caster, Swivel Conductive
23	711005	4	SCR, Set 1/4-20 x .31
24	712562	4	SCR, HH 1/4-20 x .75
25	760984POL	1	BKT, Wheel
26	800257	2	Axle, SS
27	711582	2	WSR, Wave
28	800255	2	Wheel Conductive
29	800262	2	Wheel Guard
30	711504	4	WSR, Flat 1/4 SS
31	712758	4	WSR, Helical 1/4 SS
32	712565	4	BLT, RH 1/4-20
33	711594	2	WSR, Flat
***	800256		Tank Asy Comp SS w/Deflector



## Tool Kit Explosion Proof Wet/Dry 800271

<b>A</b>		800022 800023 800175MCH	5" Rd Dust Brsh, Alum, Complete Bristle Insert 5" Dust Brush HSG
<b>B</b>		800034	24" Crev Tool Aluminum, Complete
<b>C</b>		800267	Exp-Proof Wand Asy 1-1/2, Complete
<b>D</b>		800268 800064 800269	Set Tube, High-up 10' Exp, Complete 5' Tube Lower Section 5' Section Upper Exp-Proof
<b>E</b>		800270	Swivel, Hose End Exp, Complete
<b>F</b>		800276	Hose Neo Grd Asy 1.5 x 12, Complete
<b>G</b>		800285 712562 712758 800033 800193POL	6" Curved Pipe Tool, Complete BLT-HH 1/4-20x.75 SS WSR-Helical 1/4 SS Bristl Insrt Curvd 6' 6" Curved Pipe Tool
<b>H</b>		800286 712545 712764 800187 800217 800218	12" Gulper Tool Ex Proof, Complete SCR-MC 10-32x.87 SS WSR-Flat #10 SS Gulper Nozzle Fibre Shoe Rear Fibre Shoe Front
<b>I</b>		800287 710530 800003MCH 800178MCH	14" Fibre Tool Complete Screw 8/32 x 1/2 Brass Fibre Shod Tool Casting
<b>J</b>		800288	6" Tool W/Handle Tube, Complete
<b>K</b>		800280 712516 800121 800178MCH 800239 800240	14" Squeege Ex Prof, Complete SCR-SC 8-32x.62 SS 14" Retaining Strip Casting, Tool MCH Blade Squeege Wide Blade Squeege Narrow

## Tool Kit Explosion Proof Dry Only 800272

<b>A</b>		800022 800023 800175MCH	5" Rd Dust Brsh, Alum, Complete Bristle Insert 5" Dust Brush HSG
<b>B</b>		800034	24" Crev Tool Aluminum, Complete
<b>C</b>		800267	Exp-Proof Wand Asy 1-1/2, Complete
<b>D</b>		800268 800064 800269	Set Tube, High-up 10' Exp, Complete 5' Tube Lower Section 5' Section Upper Exp-Proof
<b>E</b>		800270	Swivel, Hose End Exp, Complete
<b>F</b>		800276	Hose Neo Grd Asy 1.5 x 12', Complete
<b>G</b>		800285 712562 712758 800033 800193POL	6" Curved Pipe Tool, Complete BLT-HH 1/4-20x.75 SS WSR-Helical 1/4 SS Bristl Insrt Curvd 6' 6" Curved Pipe Tool
<b>H</b>		800286 712545 712764 800187 800217 800218	12" Gulper Tool Ex Proof, Complete SCR-MC 10-32x.87 SS WSR-Flat #10 SS Gulper Nozzle Fibre Shoe Rear Fibre Shoe Front
<b>I</b>		800287 710530 800003MCH 800178MCH	14" Fibre Tool Complete Screw 8/32 x 1/2 Brass Fibre Shod Tool Casting
<b>J</b>		800288	6" Tool W/Handle Tube, Complete

# LIMITED WARRANTY

Minuteman International, Inc. warrants to the original purchaser/user that this product is free from defects in workmanship and materials under normal use and service for a period of three years from date of purchase. In addition, Minuteman International, Inc. will, at its option, honor labor warranty claims for the first 12 months from date of sale, provided such claims are submitted through and approved by factory authorized repair stations. Minuteman International, Inc. will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care, such as belts, cords, switches, hoses, rubber parts, electrical motor components or adjustments. Parts not manufactured by Minuteman International, Inc. such as engines, batteries, battery chargers, hydraulic pumps, and tires are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International, Inc. for procedures in warranty claims against these manufacturers.

**Special warning to purchaser** — Use of replacement filters and/or prefilters not manufactured by Minuteman International, Inc. or its designated licensees, will void all warranties expressed or implied.

A potential health hazard exists without exact original equipment replacement.

All warranted items become the sole property of Minuteman International, Inc. or its original manufacturer, whichever the case may be.

Minuteman International, Inc. disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman International, Inc. assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. Minuteman International, Inc. is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman International, Inc. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product.

If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

## ***Minuteman***<sup>®</sup>

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