
Minuteman[®]
Excellence Meets Clean



Parts and Instruction Manual
TRS 14
Total Recovery System

This manual is furnished with each new **MINUTEMAN TRS 14** . This provides the necessary operating and preventive maintenance instructions. Operators must read and understand this manual before operating or servicing this machine.

This machine was designed to give you excellent performance and efficiency. For best results and minimal cost, please follow the general guidelines below:

- Operate the machine with reasonable care.
- Follow the manufacturers suggested maintenance instructions as provided in this booklet.
- Use original Minuteman supplied parts.

TECHNICAL SPECIFICATIONS

Model	TRS 14
Model No.	TRS14115
Vac Motor	3 Stage 1 HP
Water Lift	80" (203cm)
Capacity	14 gal. (53L)
Flow	250psi at nozzle, 1gpm
Wheels	12" (30.5cm)
Casters	5" (13cm)
Length	32" (81cm)
Width	43" (109cm)
Height	25" (63.5cm)

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Safety Precautions

This machine is intended for commercial use. Use only recommended cleaning solutions and accessory tools.

All operators must read, understand and practice the following safety precautions.

The following safety alerts symbols are used throughout this manual as indicated in their description:

! WARNING: To warn of hazards or unsafe practices which could result in severe personal injury or death.

FOR SAFETY: To identify actions which must be followed for safe operation of equipment.

The following information signal potentially dangerous conditions to the operator or equipment:

FOR SAFETY:

1. **Do not operate machine:**
 - Unless trained and authorized.
 - Unless operator manual has been read and understood.
 - In flammable or explosive areas.
 - Unless cord is properly grounded.
 - With damaged cord or plug.
 - If not in proper operating condition.
 - In outdoor areas.
 - In standing water.
 - With the use of an extension cord.
2. **Before operating machine:**
 - Make sure all safety devices are in place and operate properly.
3. **When using machine:**
 - Do not run machine over cord.
 - Do not pull machine by plug or cord.
 - Do not pull cord around sharp edges or corners
 - Do not unplug by pulling on cord.
 - Do not stretch cord.
 - Do not handle plug with wet hands.
 - Keep cord away from heated surfaces.
 - Report machine damage or faulty operation immediately to your distributor.
 - Follow mixing and handling instructions on chemical containers.

4. Before leaving or servicing machine:

- Turn off machine.
- Unplug cord from wall outlet.

5. When servicing machine:

- Unplug cord from wall outlet.
- Avoid moving parts.
- Do not wear loose jackets, shirts, or sleeves.
- Use manufacturer supplied or approved replacement parts.

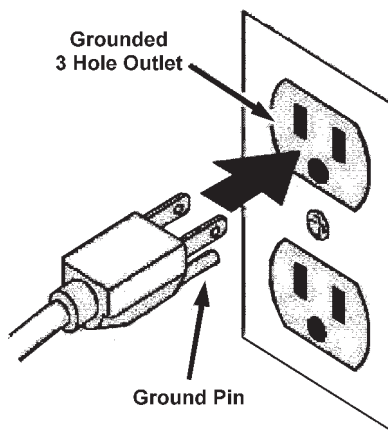
! WARNING: Hazardous Voltage. Shock or electrocution can result. Always unplug machine before servicing.

! WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

! WARNING: Flammable materials or reactive metals can cause an explosion or fire.

Grounding Instructions

Machine must be grounded. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed in accordance with all local code and ordinances. Do not remove ground pin; if missing, replace plug before use.



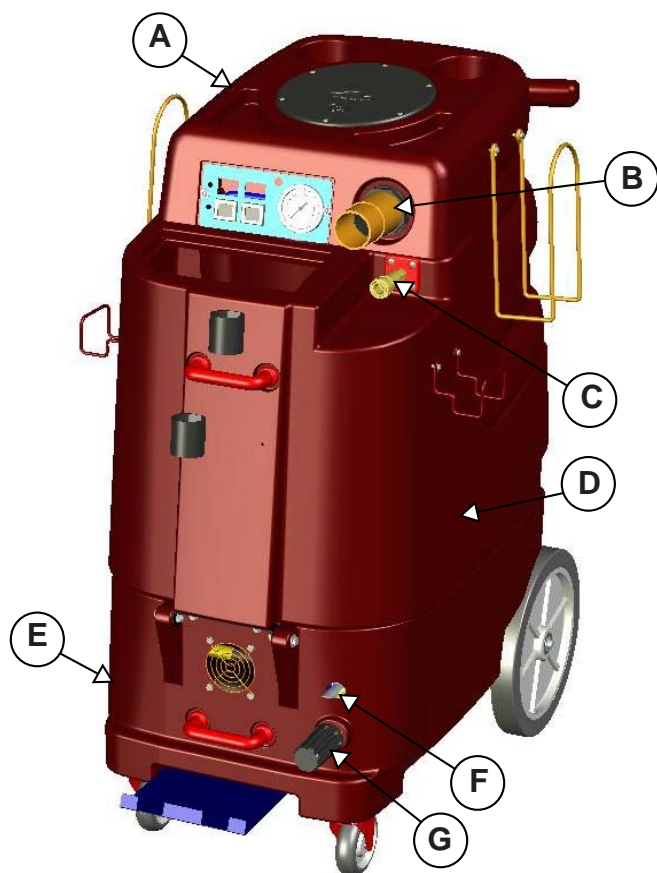
Safety Labels

The safety labels appear on the machine in various locations. Replace labels if they become damaged or cannot be read.

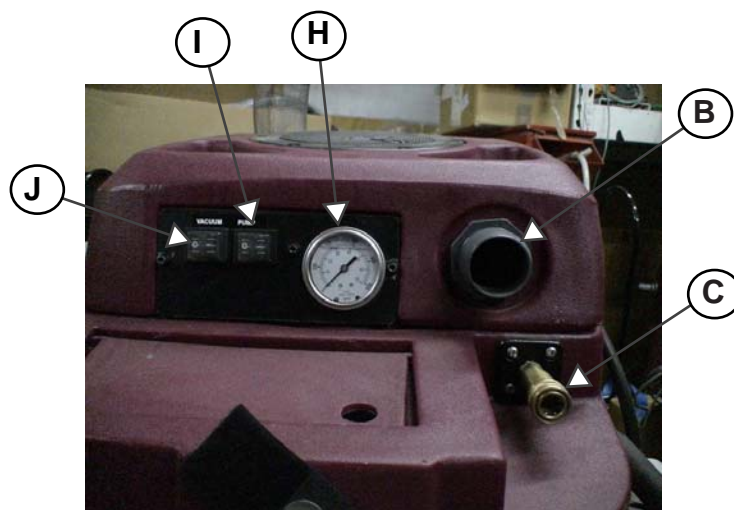
⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s). Flammable materials or reactive metals can cause explosion or fire.

⚠ WARNING LABEL- Located on back. Label warns operator of safe practices of equipment

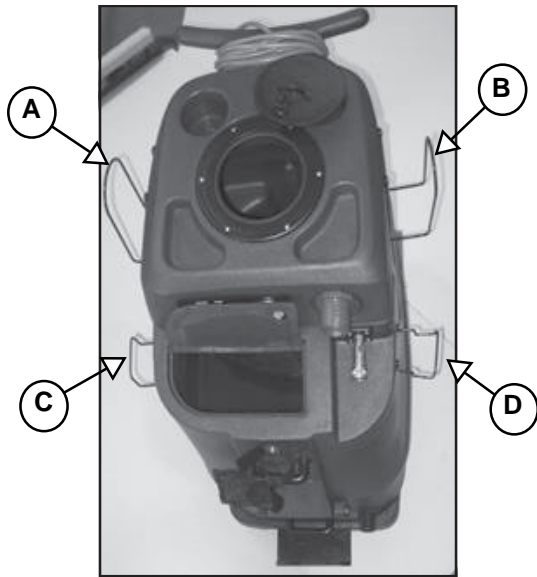
Machine Components



- A RECOVERY TANK
- B VACUUM HOSE CONNECTOR
- C SOLUTION HOSE CONNECTOR
- D SOLUTION TANK
- E MOTOR HOUSING/BASE
- F PRIME VALVE
- G PRESSURE REGULATOR
- H PRESSURE GAUGE
- I PUMP SWITCH
- J VACUUM SWITCH

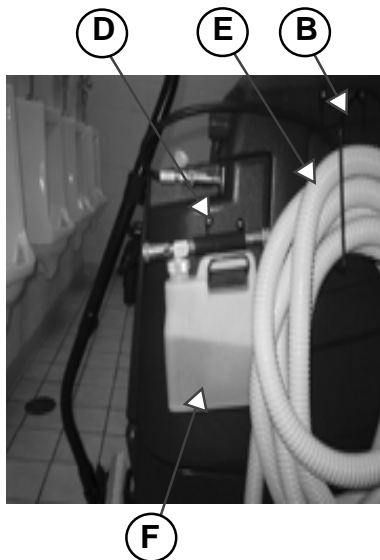


Machine Components

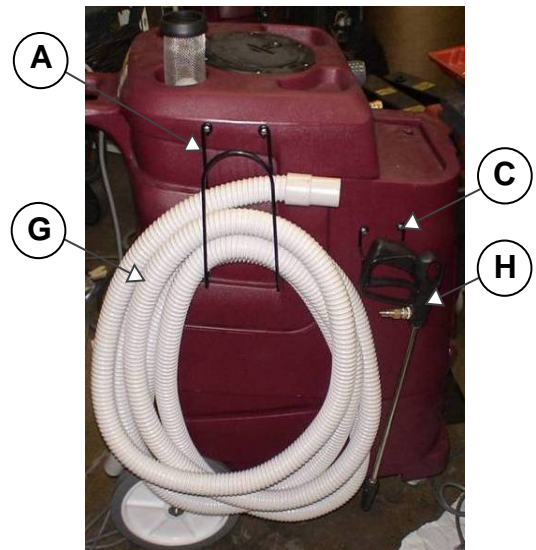


The unit is equipped with 4 wire brackets two small and two large

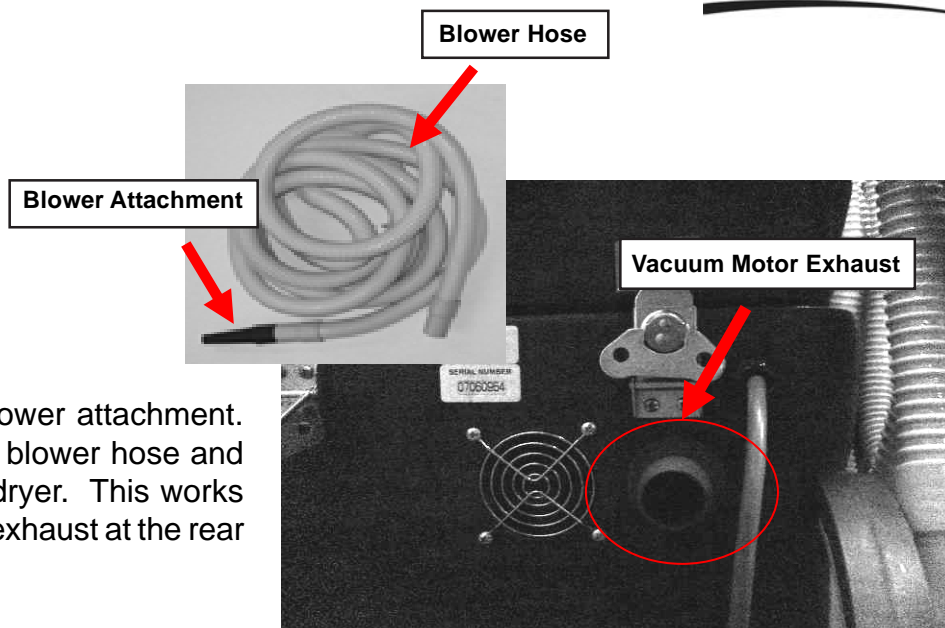
- A RIGHT HAND LARGE BRACKET
- B LEFT HAND LARGE BRACKET
- C RIGHT HAND SMALL BRACKET
- D LEFT HAND SMALL BRACKET
- E RECOVERY HOSE
- F CHEMICAL PROPORTIONING TANK
- G BLOWER HOSE
- H PRESSURE GUN



Left hand side large bracket will hold the recovery hose. Small bracket holds chemical proportioning tank.



Right hand side large bracket will hold the blower hose. Right hand side small bracket will hold the pressure gun.



Dryer assembly

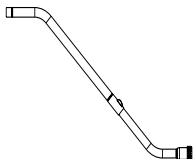

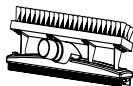


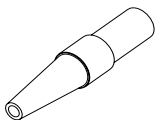
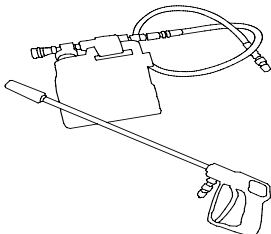
The TRS 14 comes with a blower attachment. This attachment hooks to the blower hose and is designed to be used as a dryer. This works by utilizing the vacuum motor exhaust at the rear of the machine.

Clam Shell Design

Disconnect the two latches in the back of the unit and rotate the top half of the machine forward then disconnect the vac hose. This will allow access to all motors and electronics. This machine is very easy to service.



Tools & Accessories

121092 - TRS 14 Tool Assembly Complete	
	121089 - 1-1/2" Curved Telescopic Wand
	121086 - 1-1/2" Gulper Tool
	121090 - Scrub & Vac Tool
	121091 - 1-1/2" Vac Hose Assy 25 FT.
	121082 - Faucet Fill Hose Assy
	121101 - Blower Attachment
	121097 - Slimline Injection Sprayer

Machine Set Up

Pre-Operation

1. Vacuum and remove all debris.
2. Perform MACHINE SETUP procedures.
3. Inspect power cord for damage.

Set Up

1. Carefully check carton for signs of damage. Report damage at once to freight carrier. The machine is shipped fully assembled and is ready for use.
2. Open lid of solution tank. Fill solution tank with water or approved cleaning agent.

⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable solutions or materials in tank(s).

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

ATTENTION: If using powdered cleaning chemicals, mix prior to adding.

3. Attach solution hose. (Located front of machine.)

NOTE: Make sure the quick disconnects snap together firmly. As you do this, always inspect hoses for cracks or fraying. Do not use if hoses are damaged.

4. Attach other end of solution hose to wand.
5. Attach vacuum hose to recovery tank.
6. Locate a 20 Amp dedicated power circuit, and plug the machine cord in. The outlets must be properly grounded. Plugging into an ungrounded or improper outlet can result in equipment damage, fire, and/or harm to the operator. NEVER DISABLE THE GROUND PIN, AS SERIOUS PROBLEMS CAN RESULT!

FOR SAFETY: Do not operate machine unless cord is properly grounded.

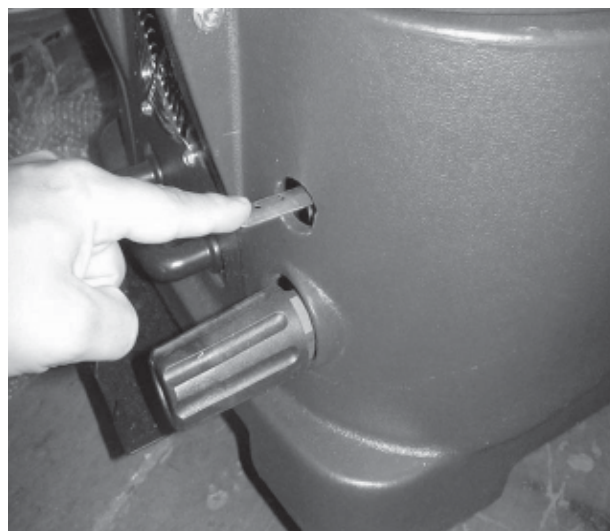
FOR SAFETY: Do not operate machine with the use of an extension cord.

Operation

1. Turn pump switch to "Hi Pressure" setting.
2. Step lightly on Power Prime for 30 seconds to prime pump completely. Use regulator adjustment to set pump at desired pressure on gauge.
3. Hook up your auto fill and pump out hoses to the appropriate connections on the back of the machine.
4. Switch on Pump-Out pump. NOTE: Pump will not begin to operate until tank is partially filled. The pump out is controlled by a sensor in the tank. MAKE SURE YOUR PUMP OUT HOSE IS SECURED TO A DRAIN.
5. Attach Auto Fill hose to a water inlet, such as a sink or a garden hose. Turn on the water at medium to medium low pressure. Monitor solution tank as it fills for the first time, to ensure that the Auto Fill shuts off correctly.
6. Switch on both Vacuum 1 and Vacuum 2
7. Begin cleaning. As you clean, monitor your tank levels. The clean water tank should never be run empty, and the dirty water tank should never be run full.

Priming

To prime the TRS simply connect all the solution hoses i.e. chemical metering, spray gun. Then turn on the pump switch and push down on the priming lever. At this point the TRS will reach its operating pressure.





WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

1. Work away from outlet and power cord to prevent cord damage.
2. Use a recommended foam control solution in the recovery tank to prevent vacuum motor damage. Periodically check for excessive foam buildup in solution tank.
3. To clean heavily soiled areas, repeat cleaning path from different direction.
4. When ball float shuts off vacuum, it is time to empty the dirty water from the recovery tank, and refill solution tank.

NOTE: When cleaning upholstery, always check cleaning instructions sewn in furniture by manufacturer

5. After cleaning, relieve water pressure from tool before disconnecting hose. Squeeze trigger for five seconds after turning main power switch off.

Draining Recovery Tank

FOR SAFETY: When servicing machine, unplug cord from wall outlet.

1. Turn machine off and unplug power cord.
2. Remove solution & vacuum hose
3. Lift up drain valve lever to empty solution tank.

Machine Maintenance

To keep machine in good working condition, simply follow machine's daily and weekly maintenance procedures.

FOR SAFETY: When servicing machine, unplug cord from wall outlet.

Parts-Washing Solutions:

Water-Based (Aqueous) Biodegradable Solutions—

These alkaline solutions wash away both organic soils (including grease, oil, and soft carbon) and inorganic soils (such as epoxy, hard-water residue, corrosion, oxides, paint, plating salts, and rust). For faster cleaning action, heat cleaners up to 140° F. Rinse with water. Dilute general purpose formula with four to nine parts of water. Nonferrous metals formula is formulated for aluminum and other nonferrous metals. Mix three to eight ounces of this powder per gallon of water.

Maintenance

DAILY:

1. Empty and rinse out recovery tank thoroughly.
2. Wipe off power cord and check for damage, replace if necessary. Coil cord neatly after use.
3. Clean machine with an all purpose cleaner and damp cloth.

Weekly Maintenance

(EVERY 20 HOURS OF OPERATION)

1. Flush solution system with a system maintainer to dissolve normal chemical buildup.
 - a. Pour 7.5L (2 gal) of hot water 60°C (140°F) into solution tank. Add system maintainer according to mixing instructions on bottle

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

- b. Operate machine for one minute.
- c. Shut off machine and allow remaining solution to break down chemical buildup overnight.
- d. Next day, spray out remaining solution and flush system with 11L (3gal) of clean water.
2. Inspect vacuum hoses for holes and loose cuffs.
3. Inspect spray pattern for clogging. If clogged, remove spray tips and soak them in a recommended liquid neutralizer for up to six hours. To remove spray tip, twist spray tip body counter-clockwise. Do not use pointed objects to unplug tips, damage will occur.
4. Lubricate wheels with water resistant oil.
5. Inspect machine for water leaks and loose hardware.
6. Remove float shut-off screen from recovery tank and clean.

Storing Machine

1. Before storing machine, be certain to completely drain and rinse tanks of all water and solution.
2. Drain and dry the vacuum hose as well, using the drain hose provided
3. Store machine in a dry area in the upright position.
4. Open recovery tank cover to promote air circulation

Troubleshooting

SYMPTOM: UNIT WILL NOT TURN ON:

PROBLEM: Not plugged in.

SOLUTION: Plug machine in proper outlet.

PROBLEM: Circuit breaker has popped.

SOLUTION: Reset circuit breaker. Make sure no other items are running on the same circuit as machine. Outlet must be a 15-amp circuit.

PROBLEM: Wire from power cord has become disconnected from terminal block.

SOLUTION: Reattach wire to terminal block.

SYMPTOM: PUMP IS NOT RUNNING PROPERLY:

PROBLEM: Quick disconnects are not completely locked together.

SOLUTION: Snap quick disconnects firmly together.

PROBLEM: The solution tank is empty.

SOLUTION: Fill the solution tank up with a premixed detergent.

PROBLEM: Jet on tool is clogged.

SOLUTION: Clean jet with soft wire brush or remove jet and flush clean.

PROBLEM: Filters are clogged.

SOLUTION: Remove filters and rinse clean with water.

PROBLEM: Brass check valve is stuck.

SOLUTION: Replace with new check valve.

PROBLEM: Pump wire has become disconnected.

SOLUTION: Reconnect wire.

PROBLEM: Switch on switch plate is bad.

SOLUTION: Replace switch.

PROBLEM: Pump motor brushes are worn out.

SOLUTION: Replace pump.

SYMPTOM: VACUUM MOTOR IS NOT WORKING PROPERLY:

PROBLEM: Hose not connected tightly to upholstery tool or machine.

SOLUTION: Connect hose tightly.

PROBLEM: Drain valve is not shut completely.

SOLUTION: Close drain valve completely.

PROBLEM: Vacuum tank lid is not on tightly.

SOLUTION: Secure the vacuum tank tightly.

PROBLEM: Ball float is shut off.

SOLUTION: Empty the vacuum tank of all wastewater.

PROBLEM: Water is coming out of vacuum motor.

SOLUTION: Use a low foaming detergent.

PROBLEM: Floor wand is clogged with hair, carpet fibers and or debris.

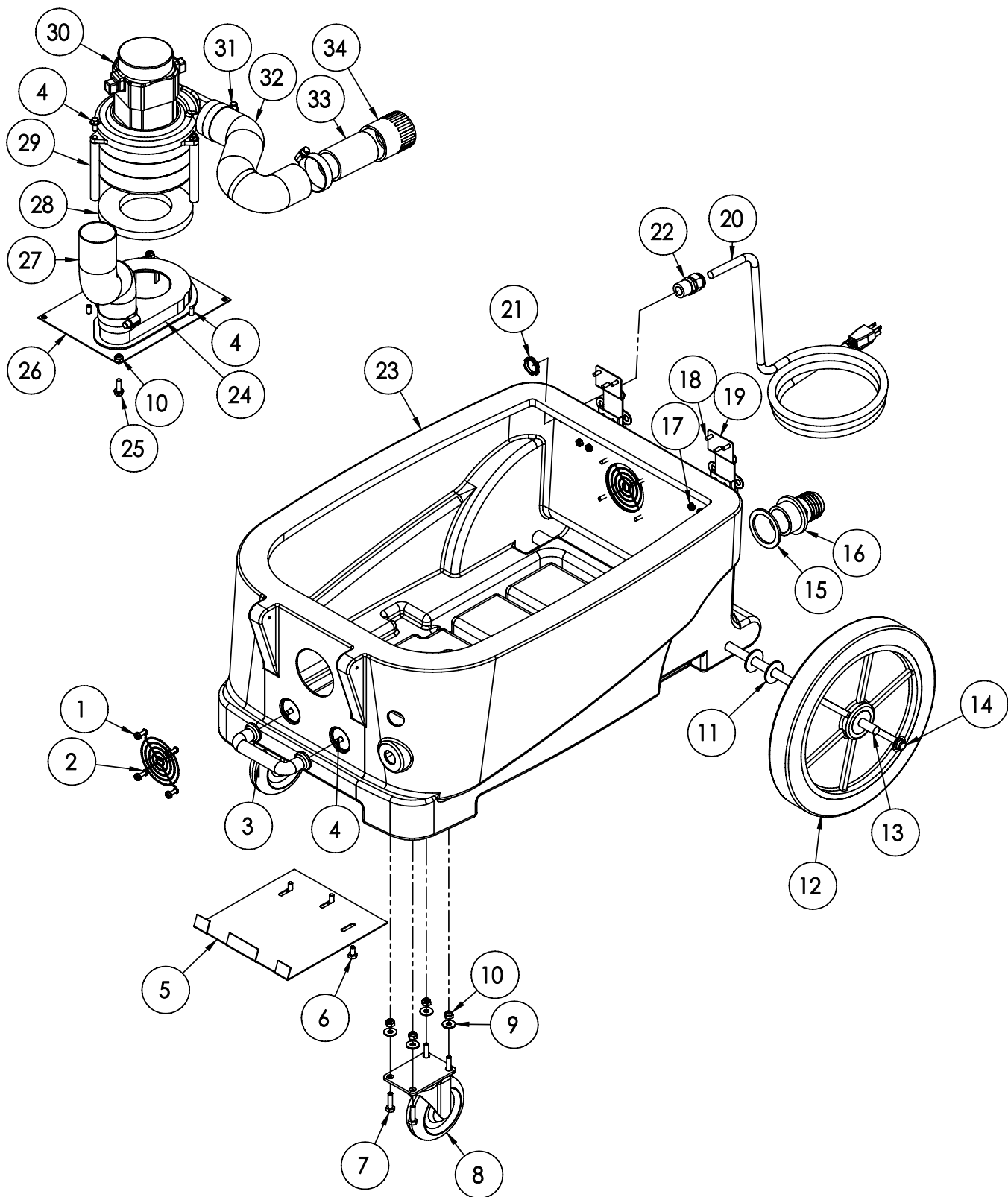
SOLUTION: Clean floor wand.

PROBLEM: Ball float is not installed correctly.

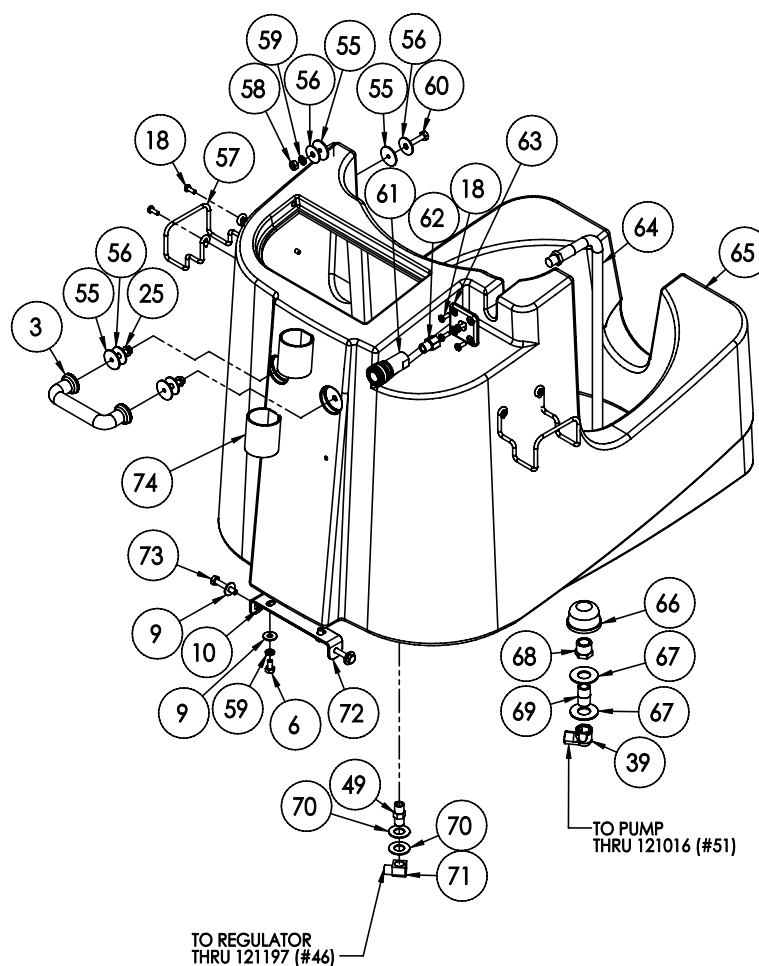
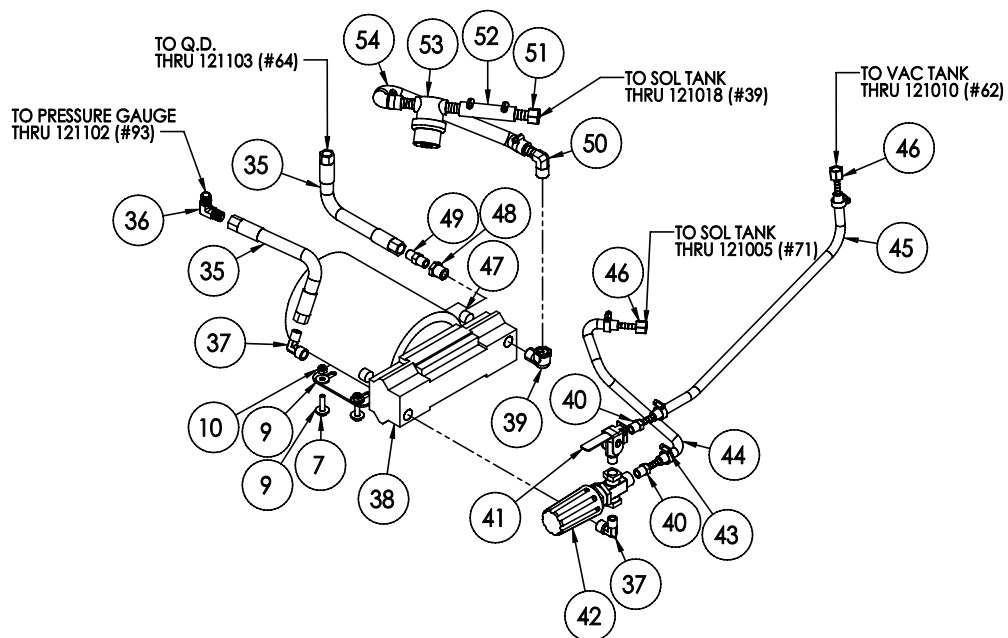
SOLUTION: Make sure that ball float is firmly installed on the elbow.

Exploded Views

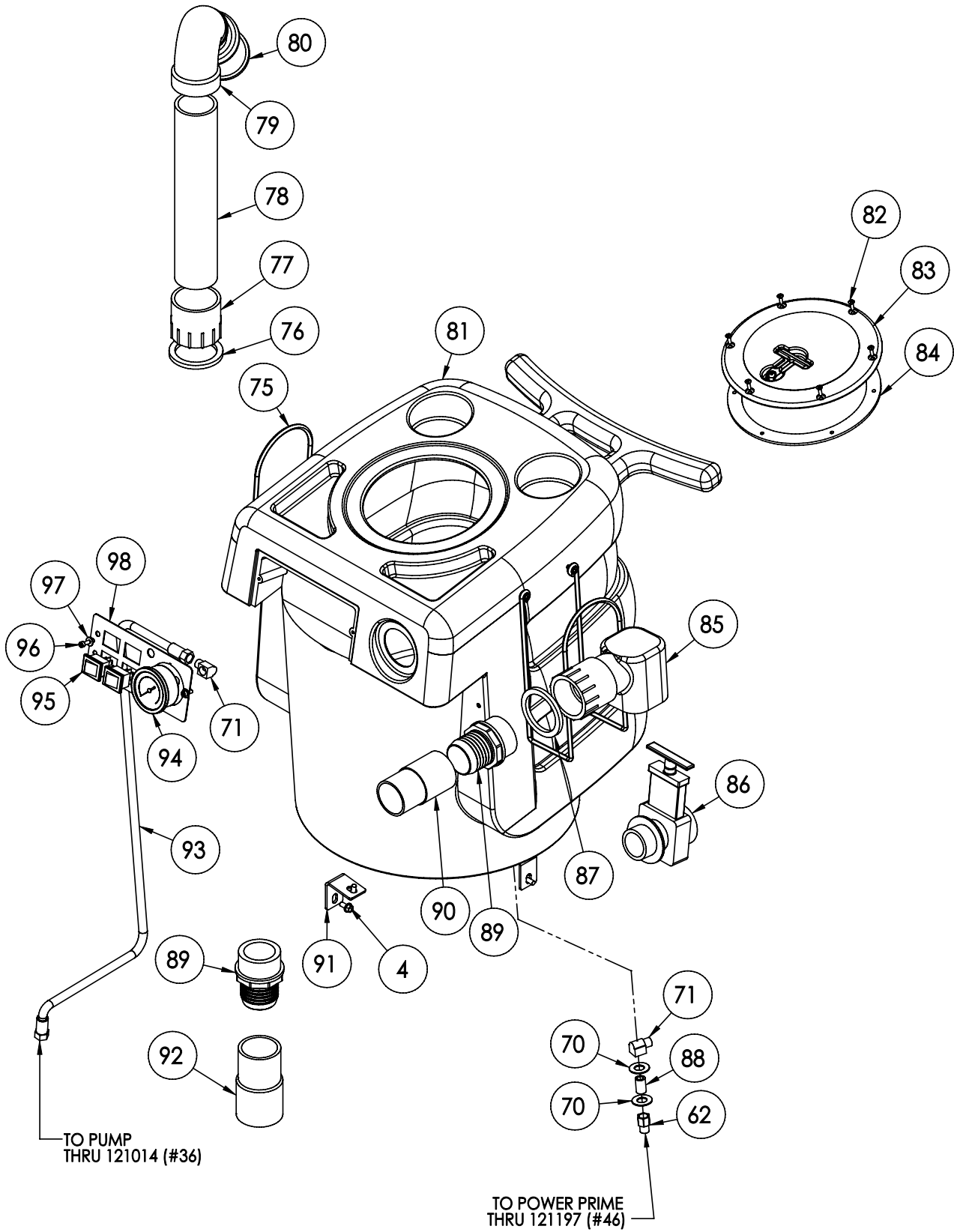
TRS 14 - Base Assembly



TRS 14 - Solution Tank Assembly



TRS 14 - Recovery Tank Assembly



Bill Of Material - TRS 14					Qty		Description		Part No.		Item		Description		Qty	
1	121203	8	screw, #10 x 5/8" hex head, zinc		50	121017	1	elbow, brass, 90 deg, 1/2" barb x 3/8" mpt			51	121016	1	adapter, brass, 1/2" barb x 3/8" fsw, ball end		
2	121061	2	guard, cooling fan, wire		52	121190	1	sol hose, 1/2" kuri 100psi			53	121104	1	filter, cup, in-line		
3	121123	2	handle, breeze		54	121212	1	sol hose, 1/2" kuri 100psi			55	121041	6	washer, buna 1-1/8" od x 3/16" id		
4	121182	12	bolt, 1/4-20 x 1/2" serrated hex flange, zinc		56	121158	8	washer, 1/4" id x 1" od, flat, s/s			57	121127	2	hanger, wire for injection bottle		
5	121204	1	plate, wand mount		58	121161	2	nut, hex, 1/4-20 s/s			59	121160	4	washer, 1/4" lock, s/s		
6	121154	5	bolt, 1/4-20 x 1/2" hex head, zinc		60	121155	2	bolt, 1/4-20 x 1-1/4" hex head			61	121004	1	qd, brass, 1/4" f		
7	121175	12	bolt, 1/4-20 x 1" hex head, s/s		62	121010	2	adapter, brass, extender, 1/4" mpt x 1/4" fpt, hex			63	121122	1	plate, mounting, QD		
8	121128	2	caster, 4"		64	121103	1	sol hose, 45" x 1/4", (OAL), m x m, for Single Jet wands			65	121206	1	sol tank, m series		
9	121157	20	washer, 1/4" flat, s/s		66	121012	1	filter, strainer, 1/2"			67	121173	2	washer, 11/16" id x 1-1/2" od x .075, s/s		
10	121162	16	nut, lock, 1/4-20, nylon insert		68	121019	1	bushing, brass, 1/2" mpt x 3/8" fpt, hex			69	121020	1	nipple, brass, 3/8" x close		
11	121167	4	washer, axle, cut 1/2" id		70	121159	4	washer, 9/16" id x 1" od, flat, s/s			71	121005	3	elbow, brass, 90 deg, 1/4" mpt x 1/4" fpt		
12	121059	2	wheel, 12"		72	121068	1	bracket, front hinge, sp/fb			73	121202	2	bolt, 1/4-20 x 1-1/2" hex head, s/s		
13	121116	1	axle, 1/2" x 21", Breeze, M-series		74	121129	2	velcro strap, kleen safe			75	121067	2	hanger, wire formed, hose		
14	121052	2	cap, axle, 1/2"		76	121200	1	gasket, 2" inlet polyethylene, 3" OD 2.35" ID			77	121137	1	adaptor, pvc 2, fmsl x fnt		
15	121037	1	gasket, inlet, 1.80" i.d.		78	121135	1	pipe, pvc, 2"			79	121077	1	elbow, 2" float		
16	121056	1	fitting, inlet, pvc, 1-1/2", gray		80	121069	1	float, 2", ball style			81	121207	1	vac tank, m series		
17	121169	8	nut, kep, #10-32 zinc		82	121174	6	screw, #8 x 5/8 phil oval, s/s			83	121044	1	lid, vac tank, black, 7"		
18	121165	27	screw, 10-32 x 1/2 phil pan		84	121045	1	gasket, 7", vac lid			85	121194	1	elbow, inlet assembly 2"		
19	121124	2	latch, front breeze		86	121054	1	valve, drain, 1-1/2"			87	121114	1	gasket, 2" inlet		
20	121031	1	power cord, ext, 50', 14/3 gry, UL		88	121007	1	nipple, brass, 1/4" x close			89	121138	2	inlet, 2"		
21	121163	1	nut, lock, 1/2" steel		90	121121	1	cuff, 2 x 1.5" crushproof			91	121119	2	Bracket, L 070-036		
22	121053	1	fitting, strain relief, cord		92	121126	1	cuff, 2"			93	121102	1	sol hose, 1/4" x 39", (OAL), f x fsw, 3000psi		
23	121205	1	base, m series		94	121201	1	gauge, pressure, 2000 PSI			95	121028	2	switch, rocker, 2 position		
24	121211	1	manifold, single vac		96	121176	2	screw, #10-32 x 1/2" SHCS, alloy			97	121072	2	washer, #8 flat, s/s		
25	121181	4	bolt, 1/4-20 x 3/4" serrated hex flange, zinc		98	121118	1	plate, switch, sp, 4 hole w/gauge								
26	121117	1	plate, single manifold, 6.5" x 9"													
27	121192	1	vac hose, 2", wire reinforced													
28	121038	1	gasket, vacuum motor													
29	121125	3	vac support, 3 stage, 4-1/16"													
30	121021	1	vac motor, 3 stage, 115V, tangential													
31	121051	3	clamp, hose, 2-1/4 DIA													
32	121213	1	vac hose, 2", wire reinforced													
33	121214	1	pipe, pvc, 1-1/2"													
34	121058	1	adapter, pvc, 1-1/2" fms x fmpt													
35	121195	2	hose, 3/8" x 10", (OAL), f x fsw, surge, 1600psi													
36	121014	1	elbow, brass, 90 deg, 1/4" mpt x 1/4" mpt													
37	121199	2	elbow, brass, 90 deg, 3/8" mpt x 1/4" mpt													
38	121110	1	pump, 450 psi, 115V													
39	121018	2	elbow, brass, 90 deg, 3/8" mpt x 3/8" fmpt													
40	121009	2	adapter, brass, 1/4" barb x 1/4" mpt													
41	121131	1	valve, prime, high pressure													
42	121111	1	regulator, 450 psi													
43	121064	8	clamp, hose, 5/16-29/32													
44	121215	1	sol hose, 1/4" kuri 150psi													
45	121216	1	sol hose, 1/4" kuri 150psi													
46	121197	2	adapter, brass, 1/4" sw barb x 1/4" fpt, w/gasket													
47	121198	2	plug, brass, 3/8" mpt, hex													
48	121006	1	bushing, brass, 3/8" mpt x 1/4"													
49	121008	2	nipple, brass, 1/4" m, hex													

Minuteman International Made Simple Commercial Limited Warranty

Minuteman International, Inc. warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. Minuteman will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

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 are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman for procedures in warranty claims against these manufacturers.

Special warning to purchaser -- Use of replacement filters and/or prefilters not manufactured by Minuteman or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

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

Minuteman disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman 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 is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman. 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.

Cord Electric Group..... Three years parts, two years labor, ninety days travel (Not to exceed two hours)
Exceptions..... Port-A-Scrub, one year parts, six months labor
MPV 13, one year parts
MPV 14 and 18, two years parts, one year labor
RapidAir blower, one year parts, one year labor
Explosion-Proof Vacuum, one year parts, one year labor
Pneumatic Vacuums, three years parts, one year labor
EX 12 and EX12H, one year parts, one year labor

Battery Operated Group..... Three years parts, two years labor, ninety days travel
(Not to exceed two hours)
Exceptions..... Sweepers, one year parts, one year labor, ninety days travel
(Not to exceed two hours)

Internal Combustion Group....One year parts, one year labor, ninety day travel
(Not to exceed two hours)

Replacement Parts.....Ninety days

Batteries.....0-3 months replacement, 4-12 months pro-rate

Polypropylene Plastic Tanks...Ten years, no additional labor