

# PremAire<sup>®</sup> System

MANIFOLD

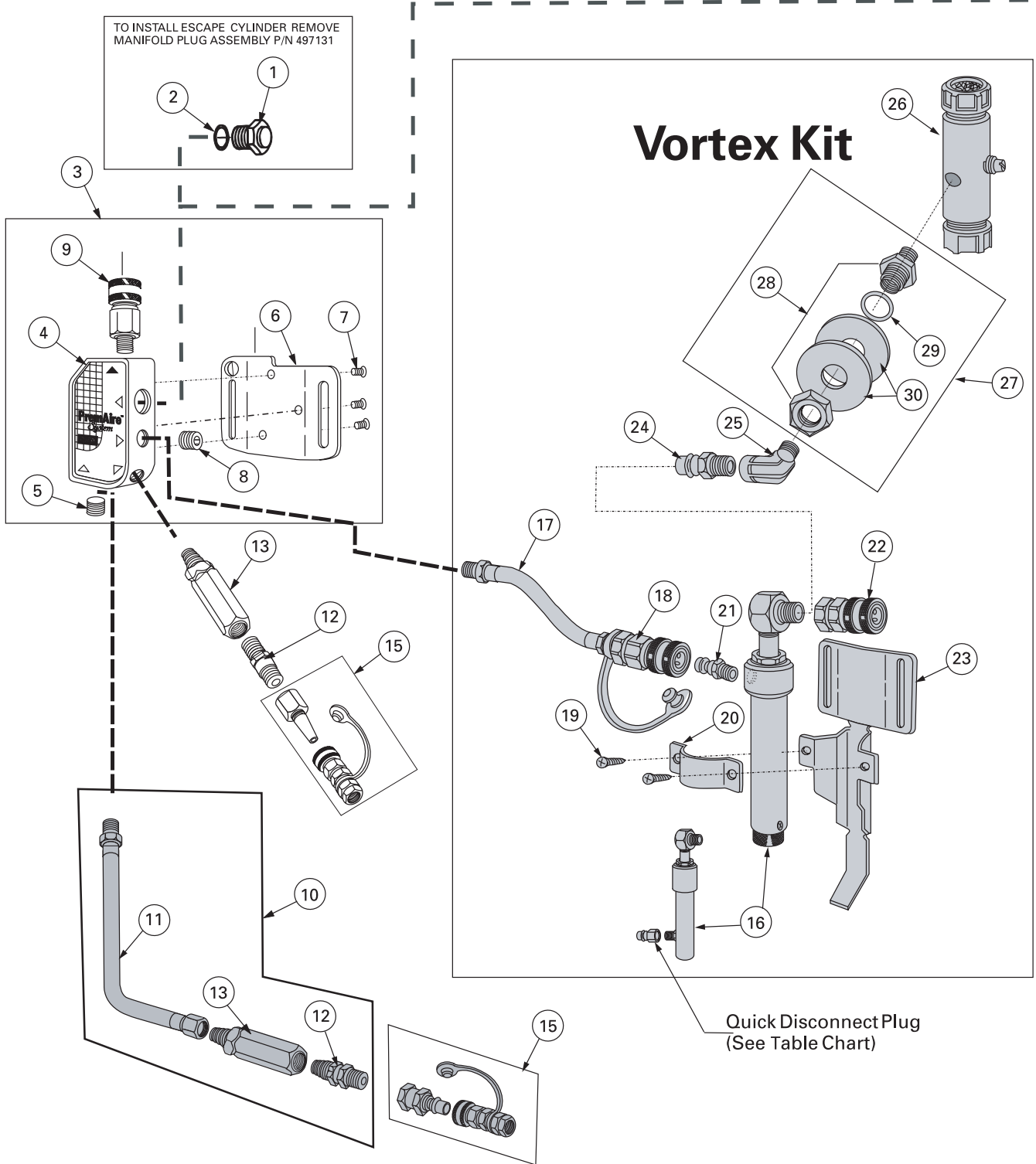


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1000 Cranberry Woods Drive  
Cranberry Twp. Pennsylvania, U.S.A. 16066

<b>MANIFOLD COMPONENTS</b>		
<b>Item</b>	<b>Part No.</b>	<b>Description</b>
1	<b>497131</b>	MANIFOLD PLUG ASSEMBLY To Instal Escape Cylinder Remove Plug Assembly
2	<b>631604</b>	O-Ring
3	<b>496697</b>	Manifold Assembly
4	<b>496880</b>	Manifold
5	<b>636159</b>	Plug
6	<b>496884</b>	Belt Bracket
7	<b>636165</b>	Screw (3)
8	<b>636159</b>	Plug
<b>QUICK DISCONNECT SOCKET LOCKING TYPES</b>		
9	<b>636489</b>	CEJN
	<b>636466</b>	Snaptite, Aluminum
	<b>638522</b>	Snaptite, Stainless Steel
	<b>638520</b>	Foster, Stainless Steel
10	<b>DUAL SUPPLY KIT</b>	
11	<b>497201</b>	Extension Hose 8 Inches
	<b>492871</b>	Extension Hose 15 Inches
12	<b>630326</b>	Check Valve
13	<b>811940</b>	Filter Assembly
	<b>811984</b>	Replacement Filter Kit
15	<b>QUICK DISCONNECT SOCKET (See Table Chart)</b>	
16	<b>497185</b>	Cool Tube
	<b>800699</b>	Warm/Cool Tube
17	<b>HOSE</b>	
	<b>496805</b>	6 Inches
	<b>801011</b>	12 Inches
18	<b>QUICK DISCONNECT SOCKET</b>	
	<b>628770</b>	Foster/Stainless Steel
	<b>66272</b>	Snaptite (shown)
19	<b>603757</b>	Screw (2)
20	<b>VORTEX BRACKET</b>	
	<b>800692</b>	Warm/Cool
	<b>496883</b>	Cool
21	<b>QUICK DISCONNECT PLUG</b>	
	<b>56549</b>	Foster/Stainless Steel
	<b>66273</b>	Snaptite (1/4 NPT)
22	<b>633541</b>	Quick Disconnect Socket (3/8 NPT)
23	<b>496881</b>	Bracket Assembly
24	<b>QUICK DISCONNECT PLUG</b>	
	<b>633539</b>	3/8 NPT
	<b>635172</b>	1/4 NPT
25	<b>631468</b>	Elbow 1/4 NPT
26	<b>491574</b>	Muffler
27	<b>491566</b>	Bulkhead Fittings
28		Adapter
29		O-Ring
30		Washer

# Manifold Assembly



# Dual Supply Kit



# MANIFOLD

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## MANIFOLD PIPE PLUGS

Inspect the manifold ports. Replace any pipe fitting that is damaged, worn or leaking using the following procedures.



1. Remove the pipe plug with the 1/4" Allen socket.
2. Clean the port(s) to remove any Teflon tape residue from the threads.
3. Replace the pipe plug first, wrapping it with Teflon tape. (See General Notes #2)
4. Insert plug(s) in the manifold port(s) and thread the parts together hand-tight, then wrench tight an additional 1-1/2 turns. Do not overtighten.

## Manifold Port



1. Remove the quick-disconnect socket from the manifold with an adjustable wrench.
2. To replace quick-disconnect socket, first wrap with Teflon tape (See General Notes #2).
3. Thread the socket into the manifold port and handtighten, then wrench tighten an additional 1-1/2 turns using the adjustable wrench. Do not overtighten.

## INSTALLING AIR LINE FILTER

**Note:** After all procedures of installation or repairs, the apparatus must be leak tested.

1. Make sure system is not pressurized.
2. Unthread the check valve P/N 630326 from the manifold (if necessary).
3. Wrap 1-1/2 turns of Teflon tape (in clockwise direction looking into the threaded end of the fitting) to the male thread of the filter assembly, beginning at the second thread. **Do not wrap tape on the first thread. Pieces of tape can break off and reduce air flow to the respirator.**
4. Clean any residual Teflon tape from the manifold port.
5. Thread the filter assembly and hand tight into the manifold main inlet port.

**Note:** The arrow on check valve must point toward the manifold.

6. Remove any pieces of Teflon tape from the check valve (just removed) and rewrap with new Teflon tape as above.
7. Thread the check valve into the filter assembly hand tight.
8. Wrench tighten all fittings an additional 1-1/2 turns. **Do not overtighten.**
9. If unit is equipped with dual supply mode, add an additional filter assembly to the dual supply port of the manifold in the same manner.

### ⚠ CAUTION

**The air entering this filter must be quality verification level (Grade) "D" or better. This filter removes only particulates from the air. It does not effect the air classification.**

## CLEANING FILTER

1. Make sure system is not pressurized.
2. Disconnect air supply hose.
3. Using two 3/4" wrenches, unthread the two parts of the filter assembly body where the two hexes meet.

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4. Remove filter element from body and back flush with air nozzle.

## ⚠ CAUTION

**Wear appropriate eye protection during back flush operation.**

5. If required filter replacement kit (P/N 811984) is available which includes new sintered bronze filter element and gasket.
6. Replace filter element. Make sure gasket is in place and reassemble two body parts with new o-ring.
7. Wrench tighten with two 3/4" wrenches.
8. Reconnect air supply hose.

## QUICK-DISCONNECT PLUG AND CHECK VALVE

1. Apply a small amount of Christo-Lube to the valve thread.

**Note:** To prevent contamination, apply Christo-Lube immediately before installation. Use a vise with flat and smooth jaws. Do not use protective sleeves.



2. Secure the filter in a vise, as shown.

3. Use a 5/8" crowfoot and foot-pound torque wrench to tighten to no more than 25 ft. lbs.

**Note:** For quick-disconnect plug, P/N 55716, tighten to no more than 112 in.lbs.

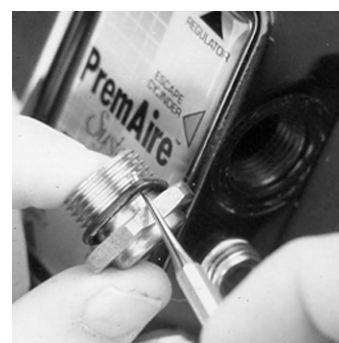
4. Attach the hose strap. (See PremAire Cadet Escape Respirator, Carrier and Harness, P/N 10114031 for instructions)

## ESCAPE CYLINDER PORT PLUG

1. To remove the port plug (or plunger housing if applicable), use the open-end wrench.



2. Inspect the O-ring on the port plug. Replace if frayed or damaged.



3. Apply a thin film of Christo-Lube lubricant on the O-ring.
4. Thread the plug (or housing) into the port. Securely tighten with adjustable wrench. Do not over tighten.

## EMERGENCY-ESCAPE CYLINDER HOSE DISASSEMBLY AND REPAIR

All repair procedures assume that the first-stage regulator is disconnected from the cylinder. Before removing the regulator from the cylinder:

1. Ensure that the cylinder valve is completely closed.
2. Connect the mask-mounted regulator hose to the manifold.
3. Ensure that nothing blocks the regulator outlet. Allow any trapped air to bleed from the respirator.

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## REMOVING THE ESCAPE CYLINDER HOSE

1. Using an adjustable wrench on hose end fitting and a 3/4" open end wrench on the elbow, unthread the hose from the elbow.



2. Disconnect the other end of the cylinder hose from the manifold plunger housing using an adjustable wrench.

**Note:** When nut is loose, pull firmly on the hose to break the O-ring connection.

## REPLACING ESCAPE CYLINDER HOSE

1. To replace hose, wrap with Teflon tape. See note #2.



2. Thread the hose end fitting into the elbow hand-tight, then wrench-tighten. Do not over tighten.
3. On the opposite end of the hose, lubricate the small O-ring on the end-fitting with a thin film of Christo-Lube.
4. Thread the hose end-fitting onto the plunger housing

in the manifold. Securely tighten using the adjustable wrench. Do not over tighten.

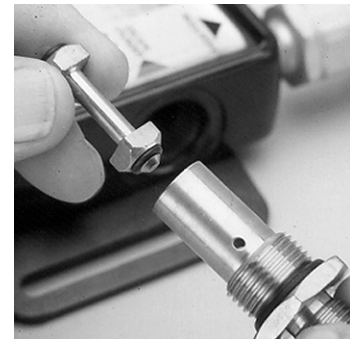
## INSTALLING THE PLUNGER VALVE AND PLUNGER HOUSING

1. First remove the plug from the "Escape Cylinder" port using the open-end wrench. Check the o-ring seat in the manifold to make sure it is clean and undamaged.

2. Remove and discard the plastic cap from the plunger housing. Slide the plunger valve from the housing and inspect the o-rings.



3. Apply a thin film of Christo-Lube lubricant to the o-rings and slide the plunger valve back into the housing.



4. Apply a thin film of Christo-Lube lubricant to the O-ring on the plunger housing. Thread the housing into the "Escape Cylinder" port. Thread the housing in hand tight, then wrench tighten to securely seat the O-ring.



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