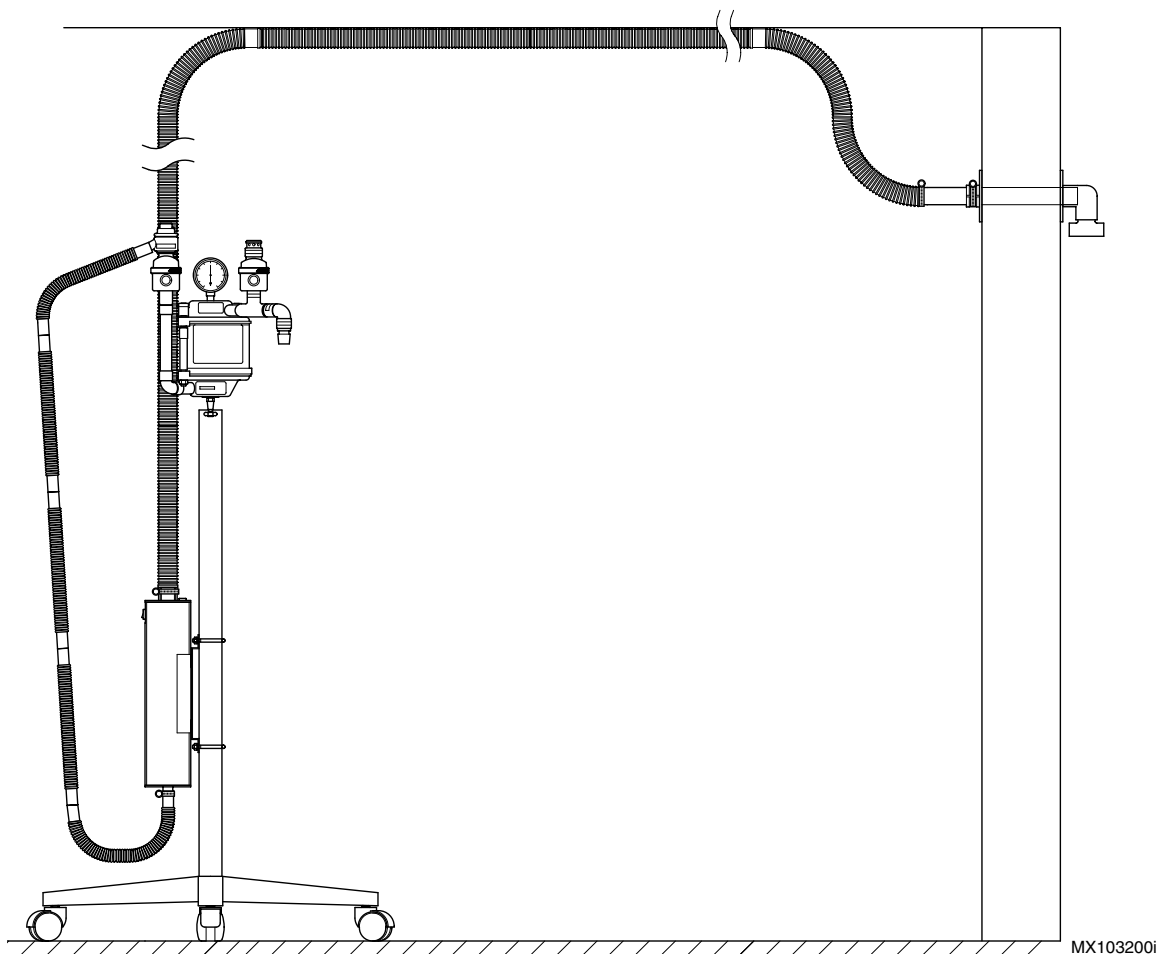




***Veterinary Anesthesia Gas Scavenging System (Active)***  
***Installation and Operation Manual***



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## Safety Symbols



### WARNING

Indicates a potentially hazardous situation which could result in serious injury if not avoided.



### CAUTION

Indicates a potentially hazardous situation which may result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices.



### Equipment Alert

Indicates a potentially hazardous situation which could result in equipment damage if not avoided

### Note

Amplifies a procedure, practice, or condition.

## Symbol Glossary

These symbols may appear on your equipment and/or in the manuals.

Section 1 UNPACKING

1.1 Examining Packaged Components

Step 1:

Examine the shipping carton for external shipping damage.

Step 2:

Remove content from each plastic bag and examine for visible damage.

Note:

Contact shipping company immediately if any damaged or broken parts are discovered.

Step 3:

Inspect and inventory components (in individual plastic bag) as shown in illustration below.

Note:

Notify your Midmark if any parts are missing.

OR

MX 1046001

Item	Quantity	Description	Item	Quantity	Description
A	1	Interface Assembly	N	8	#6 Screw
B	1	Interface Installation Manual	O	20 ft.	32mm Magenta Tubing
C	1	Wall Plate	P	1	Post Mount Installation Instructions
D	1	Tube Clamp	Q	5 ft.	19mm Magenta Tubing
E	1	1.25" Worm Gear Clamp	R	1	Interface Mounting Bracket
F	1	#10 Wood Screw	S	2	U-Bolt
G	1	Gas Disposal Subassembly	T	4	1/4" Nut
H	1	Gas Disposal Installation Instructions	U	4	1/4" Flat Washer
I	1	Scavenger Hose Suspension	V	18 ft.	19mm Magenta Tubing
J	8	Cable Tie	W	1	Wall Mount Installation Instructions
K	2	1.25" Worm Gear Clamp	X	2 ft.	32mm Magenta Tubing
L	1	.5" Worm Gear Clamp	Y	2	1/4" Flat Washer
M	8	Cable Tie Holder	Z	2	1/4" Nut
			AA	1	Interface Mounting Bracket

Refer to page 11 for Replacement Part Number Identification

Figure 1. Packaged Active Scavenger Interface Components

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## Section 2 DESCRIPTION & IDENTIFICATION

### 2.1 About the System

This veterinary anesthesia scavenging system is intended for veterinary use only. It is not intended for use in health care facilities that provide services to human beings. This device is not intended for use with flammable anesthetics. Installation of this device and its components in a veterinary operator should be made by competent individuals.

The Midmark Veterinary Anesthesia Gas Scavenging System (Active) is a device that captures excess anesthesia gas from the anesthesia machine and disperses it to the outside of your facility. This system can be used with any Midmark Anesthesia Machine or with comparable machines. The Midmark Veterinary Anesthesia Gas Scavenging System (Active) can also be used with an extracorporeal oxygenator.

### 2.2 About your Components

This Midmark Veterinary Anesthesia Gas Scavenging System (Active) incorporates the following components with some supplied in individual kits (\*).

#### SCAVENGER KIT:

The scavenger interface provides positive and negative pressure relief , provides reservoir capacity, and directs the collected gas to the Gas Disposal Vent through the disposal tubing. The interface may be mounted to either the Anesthesia Machine's base post or an exterior wall.



#### WARNING

This device is not intended for use with flammable anesthetics.



#### CAUTION

This device will exert pressures between atmospheric pressure and -0.5 cm-H<sub>2</sub>O on an oxygenator gas vent. Compatibility must be checked.

#### MOUNTING KIT (\*):

The Mounting Kit enables you to mount the interface to either a post or to an exterior (outside) wall. Refer to Figure 2 for an illustration depicting both of these mounting configurations.

#### GAS DISPOSAL KIT (\*):

The Gas Disposal Kit is designed to mount through an exterior wall of a building and to disperse the anesthetic gas from your anesthesia machine to a disposal point that is normally isolated from personnel, doors, windows, and any air intake(s) or outlet(s).



#### WARNING

Do not install the Gas Disposal Kit through the ceiling or roof.

#### TUBING KIT (\*):

##### TRANSFER TUBING

The Transfer Tubing fastens to the outlet tube of the Gas Collecting Assembly (APL valve) on your Anesthesia machine and the input port on the Active Scavenger System Interface, which is located on the bottom of the interface. The Transfer Tubing is 19mm in diameter and magenta in color.



#### CAUTION

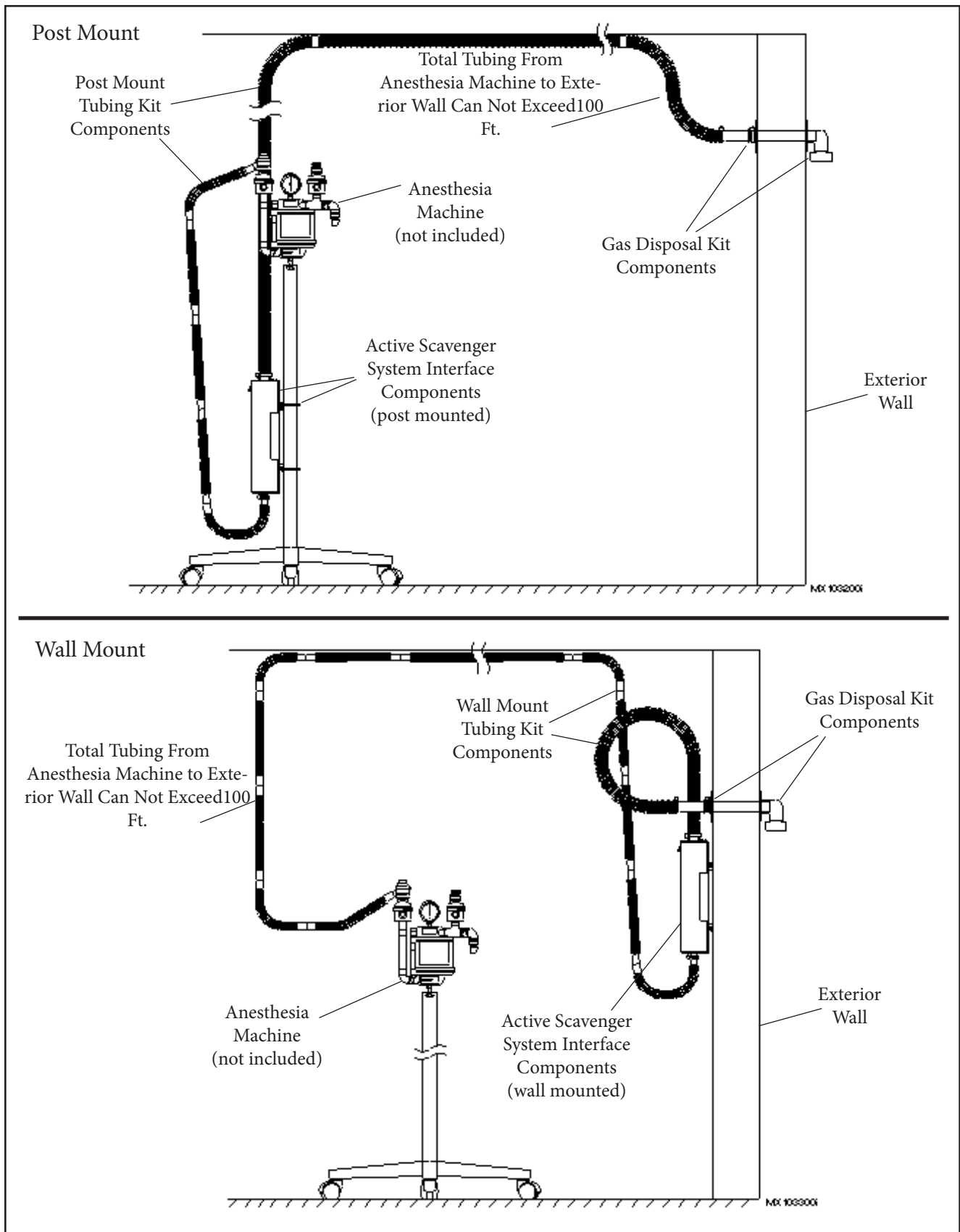
Do not clamp the transfer tubing to the APL valve.  
Do not allow the transfer tubing to run along the floor.

##### DISPOSAL TUBING

The Disposal Tubing is 32mm in diameter and is also magenta in color. The Disposal Tubing fastens between the outlet (downstream) opening which is located on top of the interface and the Gas Disposal Vent.

## Section 2 DESCRIPTION & IDENTIFICATION (cont.)

### 2.2 About your Components (cont.)



**Figure 2. Anesthesia Gas Scavenging System Configuration Options**

## Section 3 INSTALLATION

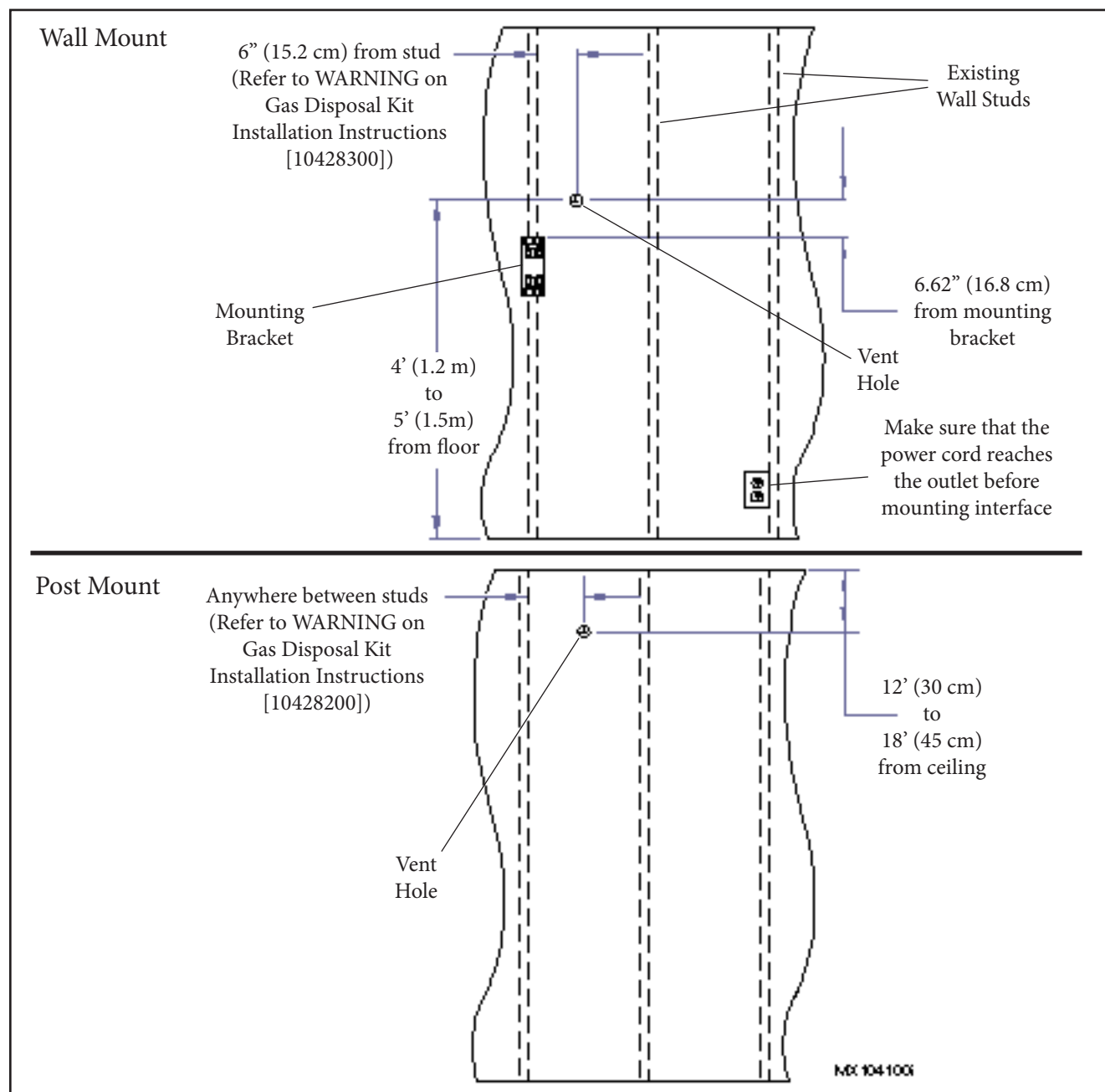
### 3.1 Getting Started

Check the location you have selected to install your Gas Disposal Vent carefully to make sure it meets all safety requirements as explained in the Instructions. The kits and components should be installed in the following order:

- Gas Disposal System
- Scavenger Interface
- Tubing

### 3.2 Installing the Gas Disposal Vent Kit

The location of the access hole for the Gas Disposal Vent depends on whether your system is a wall-mounted or post-mounted application. Refer to the illustrations in Figure 3 for correct vent hole placement. Complete the Gas Disposal Kit installation in accordance with the Installation Instructions [10420300] supplied with this kit; it is important that you heed all safety alerts stated in the Installation Instructions.



**Figure 3. Gas Disposal Vent Location**

## Section 3 INSTALLATION (cont.)

### 3.3 Installing the Scavenger Interface

#### Note

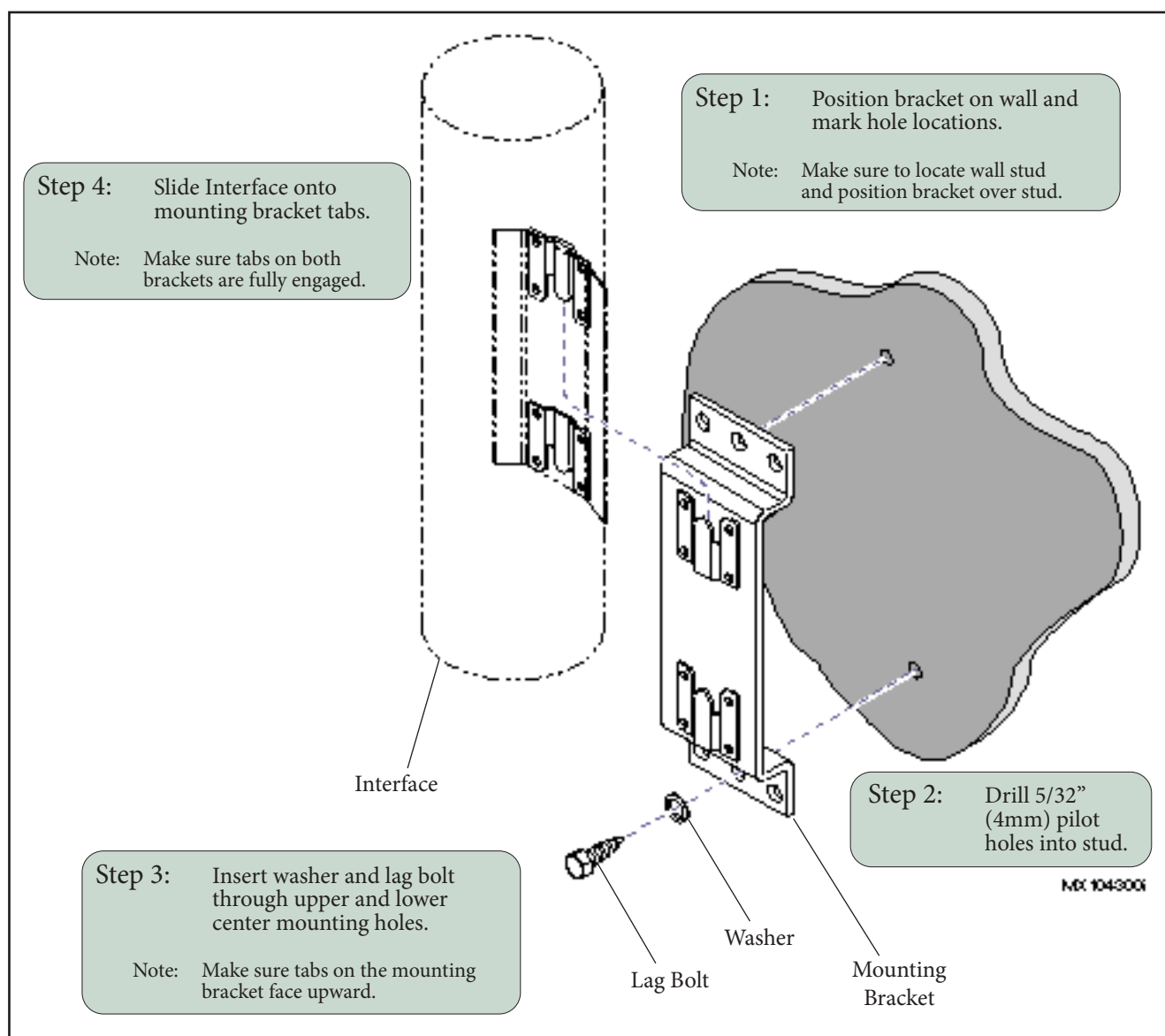
Check your location to make sure the tubing reaches from the anesthesia machine to the Interface and from the Interface to the Gas Disposal Vent (lengths vary based on interface mounting configuration [wall or post]).

#### 3.3.1 WALL MOUNT

#### Note

Before mounting interface bracket to the wall, make sure the interface's power cord will reach the nearest grounded wall receptacle. Refer to "Wall Mount" illustration in Figure 3.

Install the wall interface mounting bracket in accordance with the illustration in Figure 4. Once the mount has been successfully secured, the interface can be hung on to the hanger mounting tabs.



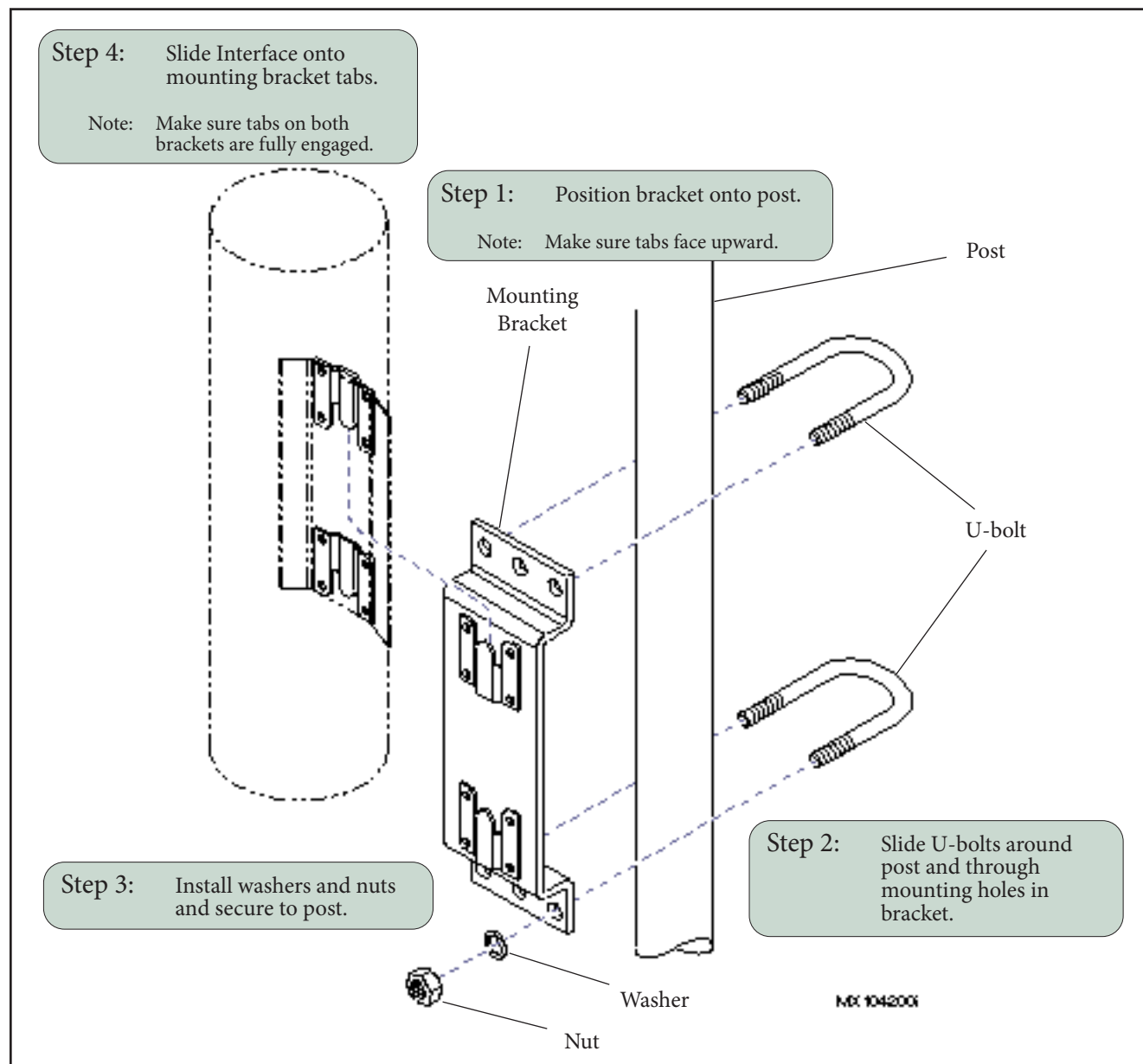
**Figure 4. Wall Mounted Scavenger Interface Bracket Mounting**

## Section 3 INSTALLATION (cont.)

### 3.3 Installing the Scavenger Interface (cont.)

#### 3.3.2 POST MOUNT

Install the post interface mounting bracket in accordance with the illustration in Figure 5. Once the mount has been successfully secured, the interface can be hung on to the hanger mounting tabs.



**Figure 5. Post Mounted Scavenger Interface Bracket Mounting**

### 3.4 Installing the Scavenger Tubing

Complete the tubing installation in accordance with the Tubing Kit Instructions (Post Mount [10428200] or Wall Mount [10428300]) supplied with this kit. It is important that you heed any safety symbols and alerts stated in the Installation Instructions. Refer to Scavenging Hose Suspension Installation Instructions (10428100) for “Preferred” and “Alternate” tubing mounting methods.

\*Total Tubing from Anesthesia Machine to Exterior Wall  
Can Not Exceed 100 Ft.



#### WARNING

Do not install the tubing up through the roof or down along the floor.



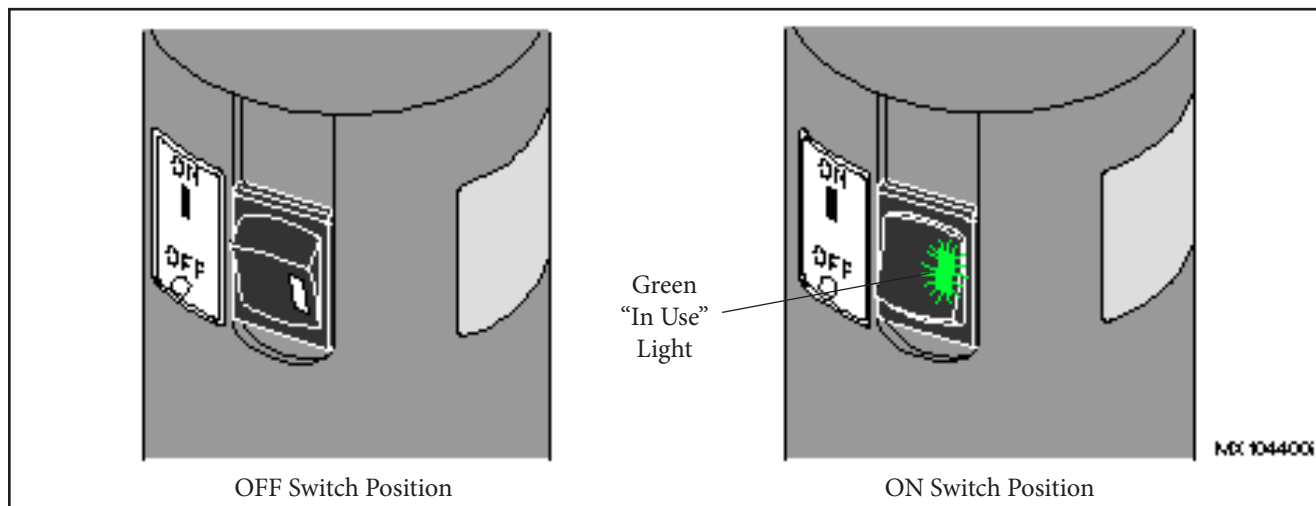
## Section 4 OPERATION

### 4.1 Operating your Anesthesia Gas Scavenging System (Active)

#### Note

This is an active scavenger system, do not use anesthesia machine unless scavenger interface is turned on.

Plug the Midmark Scavenger Interface 12 volt power supply into a grounded receptacle. Turn the Scavenger on by activating the rocker switch, located on the upper side of the interface, to the ON position. A green light will illuminate when the interface is energized. Always energize the interface prior to activating your anesthesia machine and do not de-energize the interface until after you have turned your anesthesia machine off.



**Figure 6. Interface ON/ OFF Switch**

#### Note

The leak rate from the Midmark Veterinary Anesthesia Gas Scavenging System (Active) is less than 100 ml/min during normal administration of anesthesia (excess gas flows of 10L/min or less). Test procedures are available upon request.

### 4.2 Tips for Optimal Scavenger Interface Performance

- Turn on the Scavenger before you use it. To energize, switch the ON/OFF switch to ON.
- Do not clamp the 19mm tubing to the APL valve. Use your fingers to fasten the tubing to the APL valve by securing it over the fitting.
- Make sure all tube fittings are secure before turning the Scavenger on.
- Use only the tubing supplied with your Scavenger or Midmark replacement tubing to avoid kinks or pressure in the tubing.
- Use the original tubing length or shorter. Never add additional tubing lengths to circuit.
- Make sure that the vent on the outside of the gas disposal assembly is clear and that air movement is not blocked or obstructed.
- Make sure that the vent on the outside of the gas disposal assembly is located away from people, doors, windows, and any air intakes or outlets.
- Make sure that the tubing is not lying on the floor.

## Section 5 MAINTENANCE

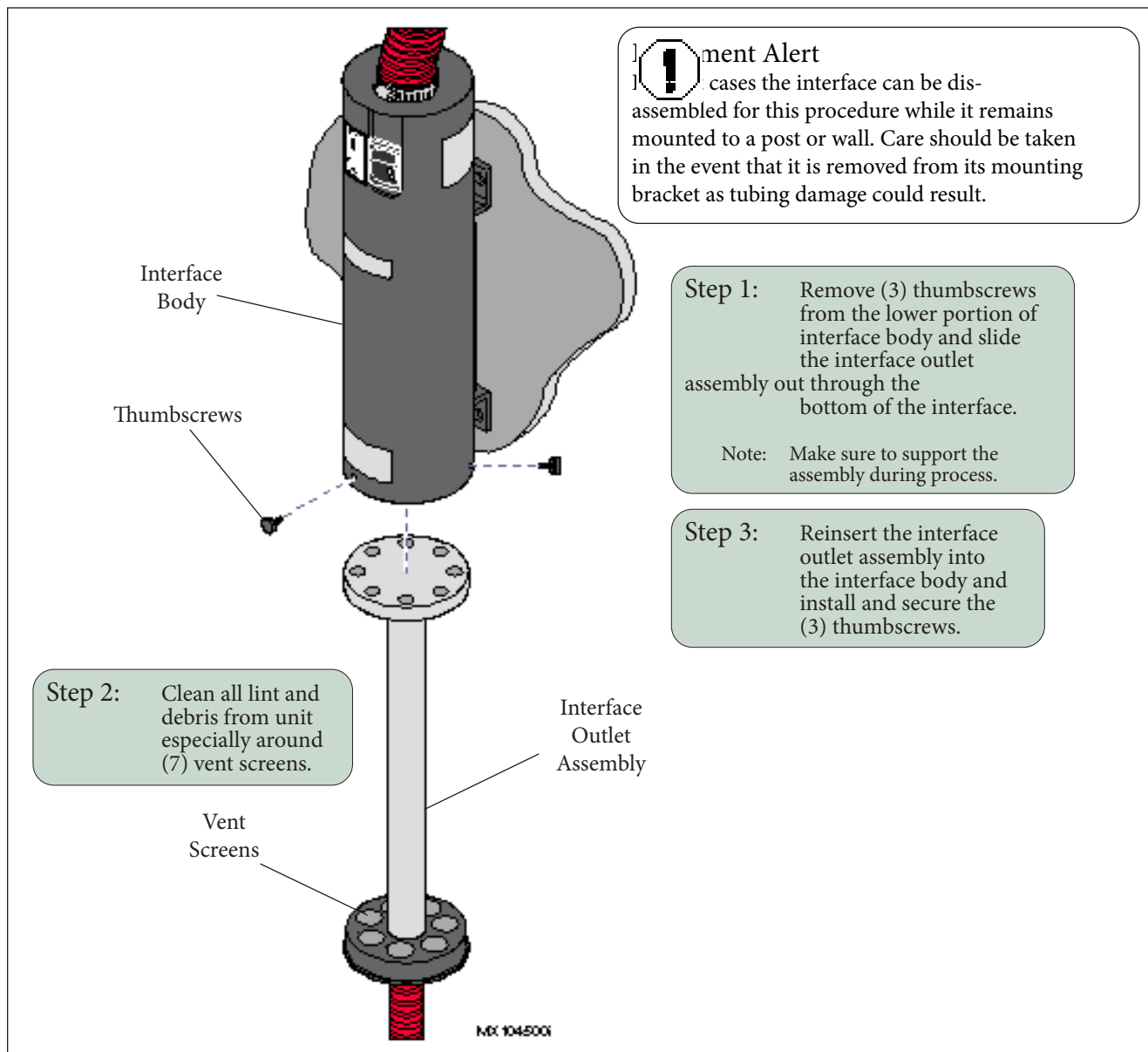
### 5.1 General Cleaning and Replacement

Inspect the Scavenger Interface and tubing circuit for damage before each use. If the unit appears to be damaged, do not use it; call your Midmark for replacement parts if necessary.

### 5.2 Periodic Maintenance

Once A Week	Once A Month	Once A Years
<ul style="list-style-type: none"> <li>• Clean the screen at the bottom of the Interface.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the Interface vents in the Interface Outlet Assembly; refer to Figure 8 for cleaning procedure.</li> <li>• Check the Gas Disposal Vent outlet to make sure that it is not blocked by ice or other debris.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace all 19mm tubing from APL valve to Interface.</li> <li>• Replace all 32mm tubing from Interface to Gas Disposal Vent.</li> </ul>

**Figure 7. Periodic Maintenance Chart**



**Figure 8. Cleaning Interface Vents**

## Section 5 MAINTENANCE (cont.)

### 5.3 Troubleshooting Guide

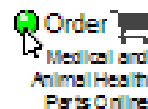
The following troubleshooting guide is helpful in analyzing problems. For any service questions contact Midmark Technical Support at 1.800.Midmark or your Midmark dealer.

<ul style="list-style-type: none"><li>• No power to unit.</li></ul>	<ul style="list-style-type: none"><li>• Make sure unit is plugged in to the receptacle.</li><li>• Check receptacle for power.</li><li>• Make sure switch is in the ON position.</li></ul>
<ul style="list-style-type: none"><li>• Green “In Use” light does not go on when switch is in the ON position.</li></ul>	<ul style="list-style-type: none"><li>• Make sure unit is plugged in to the receptacle.</li><li>• Check receptacle for power.</li></ul>
<ul style="list-style-type: none"><li>• 19mm tubing does not fit snugly on APL valve.</li></ul>	<ul style="list-style-type: none"><li>• If your anesthesia machine is not a Midmark Animal Anesthesia Machine, check the manufacturer’s specifications to determine the diameter of their APL outlet fitting. If the fitting is not compatible, replace it with a Midmark APL valve.</li><li>• Tubing is stretched or worn and should be replaced.</li></ul>
<ul style="list-style-type: none"><li>• 19mm tubing does not fit on Interface input port.</li></ul>	<ul style="list-style-type: none"><li>• Make sure that you are fastening the tubing to the input port on the bottom of the Interface.</li><li>• Tubing is stretched or worn and should be replaced.</li></ul>
<ul style="list-style-type: none"><li>• 32mm tubing does not fit on Interface outlet port.</li></ul>	<ul style="list-style-type: none"><li>• Make sure that you are fastening the tubing to the outlet port on the bottom of the Interface.</li><li>• Tubing is stretched or worn and should be replaced.</li></ul>

**Figure 9. Troubleshooting Chart**

## Section 5 MAINTENANCE (cont.)

### 5.4 Replacement Parts



The following illustration shows all available replacement parts for this product. To order replacement parts or for any service questions, contact Midmark Technical Support at 1-800-Midmark or your Midmark dealer.

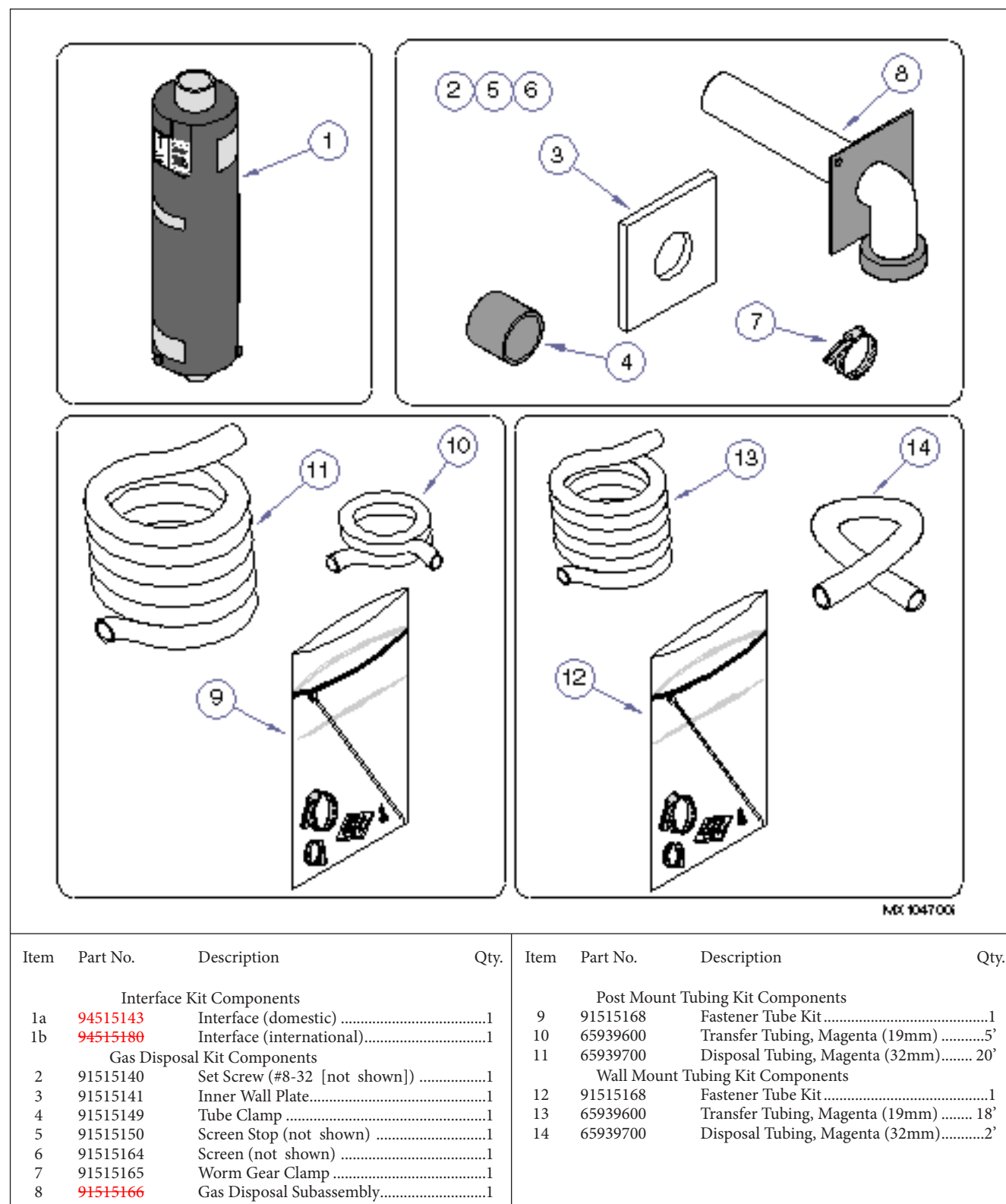


Figure 10. Replacement Parts Exploded View

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## Section 6 INFORMATION & WARRANTY

### 6.1 General Information & **6.2 Return Goods Procedure**

All repairs, unless otherwise specified, should be performed by an authorized Midmark service representative. Call 1.800.MIDMARK (1.800.643.6275) or Customer Service.

### 6.3 Warranty

**SCOPE OF WARRANTY** Midmark Corporation ("Midmark") warrants to the original retail purchaser that it will repair or replace components of the animal health products manufactured by Midmark (except for products and components not warranted under "Exclusions") that are defective in material or workmanship under normal use and service. The sole remedy under this limited warranty is the repair or replacement, at Midmark's option, of the applicable products or components. This limited warranty shall only apply to defects that: (i) are reported to Midmark within the applicable warranty period; and (ii) are determined to exist upon examination by Midmark. This limited warranty extends only to the original retail purchaser of a product, and is not transferable or assignable.

**APPLICABLE WARRANTY PERIOD** Veterinary Anesthesia Gas Active Scavenger Interface:

1 year

**OBTAINING WARRANTY SERVICE** Warranty service must be obtained through either Midmark or an authorized dealer in the Midmark product line for which warranty service is requested. Midmark may be contacted for warranty service inquiries or issues via email at [www.midmark.com](http://www.midmark.com), by mail to Midmark Corporation, 60 Vista Drive, Versailles, Ohio 45380, or by phone at: 1-800-MIDMARK.

It is the retail purchaser's obligation to arrange for delivery of a product to Midmark or one of its authorized dealers for warranty service, which delivery shall be at retail purchaser's expense. It is also the retail purchaser's obligation to comply with the warranty service instructions provided either by Midmark or its authorized dealer. The retail purchaser must provide Midmark with completed warranty registration information within thirty (30) days after purchase in order to obtain the benefits of this limited warranty.

**EXCLUSIONS** This limited warranty does not cover and Midmark shall not be liable for the following:

- (1) defects, damage or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident (including animal acts of any kind), freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
- (2) matching of color, grain or texture except to commercially acceptable standards;
- (3) changes in color caused by natural or artificial light;
- (4) products which are not installed, used and properly cleaned and maintained as required in the installation and operation manuals for the applicable product (imaging product must be installed by a certified Midmark installer);
- (5) products considered to be of a consumable nature;
- (6) accessories or parts not manufactured by Midmark;
- (7) specially manufactured products;
- (8) charges by anyone (including Midmark's authorized dealers) for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing in advance by Midmark;
- (9) costs and expenses of routine maintenance and cleaning;
- (10) all sinks, faucets and plumbing accessories;
- (11) representations and warranties made by any person or entity other than Midmark; and
- (12) with respect to software that is a product or a component thereof, that the software will be error free, can be used without problems or interruptions, or will be free from vulnerability to intrusion or attack by viruses or other methods.

**EXCLUSIVE REMEDY; CONSEQUENTIAL DAMAGES DISCLAIMER** Midmark's only obligation under this limited warranty is the repair or replacement of defective parts. Midmark shall not be liable for and hereby disclaims any direct, special, indirect, incidental, exemplary or consequential damages or delays including, but not limited to, damages for loss of profits or income, loss of use, downtime, cover, and employee or independent contractor wages, payments and benefits. This disclaimer shall survive any failure or asserted failure of the essential purpose of this limited warranty or its remedies specified herein.

**NO AUTHORIZATION** No person or firm is authorized to create or approve for Midmark any other obligation or liability in connection with Midmark products.

**WARRANTY DISCLAIMER: THIS LIMITED WARRANTY IS MIDMARK'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**STATUTE OF LIMITATIONS** No action may be brought against Midmark for breach of this limited warranty, an implied warranty, if any, or for any other claim arising out of or relating to the products, more than ninety (90) days following expiration of the warranty period. In the event multiple warranty periods exist with respect to a product, the ninety (90) day period provided for herein shall begin to run from expiration of the warranty period for the component to which the claim relates.

**SEVERABILITY** In the event any provision of this limited warranty is determined to be invalid or otherwise unenforceable: (i) the provision shall be enforced in a manner that closest holds to its intent, while at the same time curing the invalidity or unenforceability, and (ii) the balance of this limited warranty, being severable, shall not be affected in the event the provision that is invalid or unenforceable cannot be enforced in any respect.

