

NITRONOX RETROFIT KIT

DMC-5301-RFK ASSEMBLY INSTRUCTIONS

These instructions provide you with assembly steps to retrofit an existing Nitronox (Porter or non-Porter branding) with the mounted demand valve assembly provided on Porter Nitronox HD Models.

As of January 2013 Porter became the official manufacturer of record for the Nitronox systems. Nitronox devices manufactured prior to 2013 are referenced as "Non-Porter manufactured" in this instruction manual.

For your convenience, the Kit includes Porter Nitronox HD and Scavenger Manuals. Also, retain and consult your original Nitronox device Manuals, as slight differences in instructions may exist.

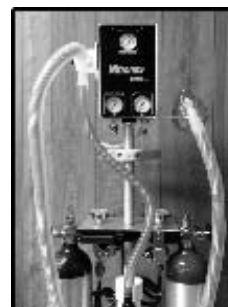
Note: Your Retrofit mounted demand valve will be on the left of the Nitronox housing, while a new Nitronox HD mounting is on the right.

Warnings and Precautions



Important: In addition to these assembly instructions, read the Nitronox HD User's Manual / Instructions FM-1308, and the Nitronox HD Scavenger System User's Manual / Instructions FM-1309, which include:

- Warnings and Precautions
- Delivery Technique
- Self-Administration Description
- Safety Checks
- Good Practices using Cylinders
- Maintenance and Troubleshooting.



Examination

Examine shipping carton for signs of external damage.

Remove contents from carton and inspect for visible damage or missing parts.

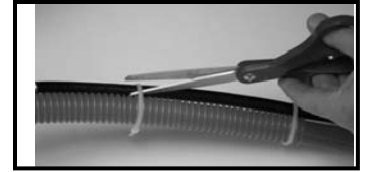
If damage is discovered or suspected and/or parts are missing, notify Porter or authorized distributor immediately.

PORTER CUSTOMER SERVICE: 215-723-4000

Installation Preparation



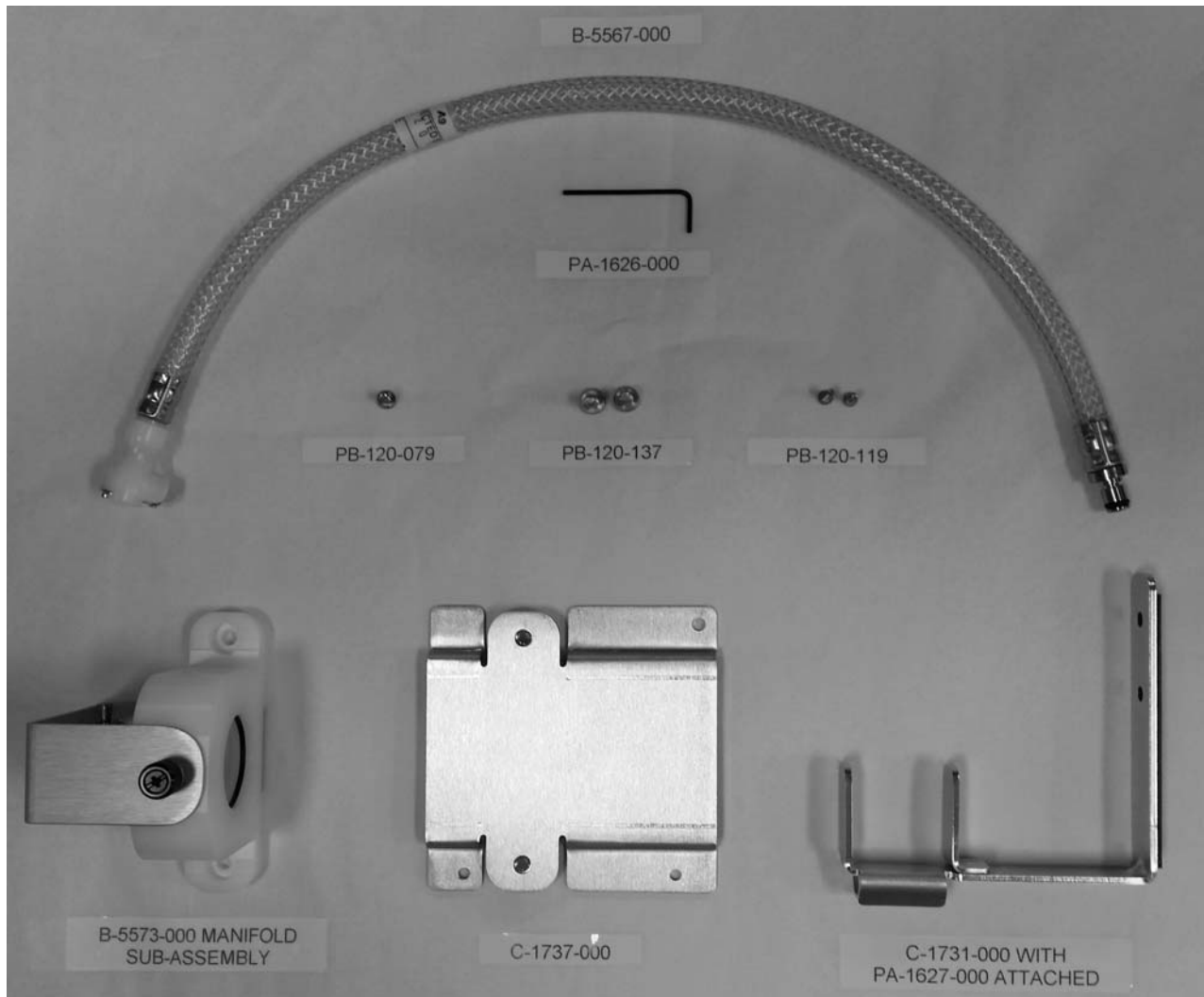
1. Portions of the existing Nitronox system will be removed.
2. When removing the 19mm Corrugated Scavenger Hose, carefully cut plastic ties with scissors (or remove Hook & Loop Ties). Disconnect the Corrugated Hose from Scavenger and from Demand Valve. Discard Corrugated Hose.



3. Disconnect the Scavenger Collection Manifold from the Demand Valve. You may encounter some resistance from the two O-ring seals. .



Contents of the Kit



Tools Required

1. Hex Key 1/16" (supplied as PA-1626-000)
2. Phillips Head (#2) Screwdriver
3. Flathead Screwdriver

Installation Options

Your Retrofit installation will differ slightly from a new Nitronox HD installation.

Retrofit mounted Demand Valve will be on left side of Nitronox.

1. Full Retrofit of a Porter Nitronox.

Disconnect the Gas Delivery Hose from the Demand Valve (use quick connect push button).

Follow Hose Replacement Instructions, then Installation of the Retrofit Bracket and Mask Hanging Bracket Installation.

2. Retrofit of a Porter Nitronox (will use the existing Gas Delivery Hose).

Skip Hose Replacement Instructions; follow Installation of the Retrofit Bracket and Mask Hanging Bracket Installation. **hose will be longer...**

3. Retrofit of a non-Porter Nitronox (will use the existing Gas Delivery Hose). **hose will be longer...**

Skip Hose Replacement Instructions; follow Installation of the Retrofit Bracket and Mask Hanging Bracket Installation. **



Warning:



The installation of a Porter Nitronox HD Retrofit Kit to a non-Porter Nitronox is not intended as a change in Intended Use of the original non-Porter medical device. The HD Retrofit Kit provides a stable mount for the Demand Valve on the side of the Nitronox and provides a connection / adapter to the Porter Medical Breathing Circuit. It is the responsibility of the user to assure that the original non-Porter Nitronox device is working properly and that any original manufacturer's instructions regarding "periodically required checks" or maintenance have been performed by the user. Non-Porter Nitronox devices older than 10 years are recommended for replacement. These devices cannot be serviced. Contact your Porter distributor for information on Nitronox trade in programs.

Hose Replacement Instructions – Porter mfg.

(Retrofit Option 1) (Retrofit Options 2 & 3 skip to Installation of Retrofit Bracket)



Fig. 1

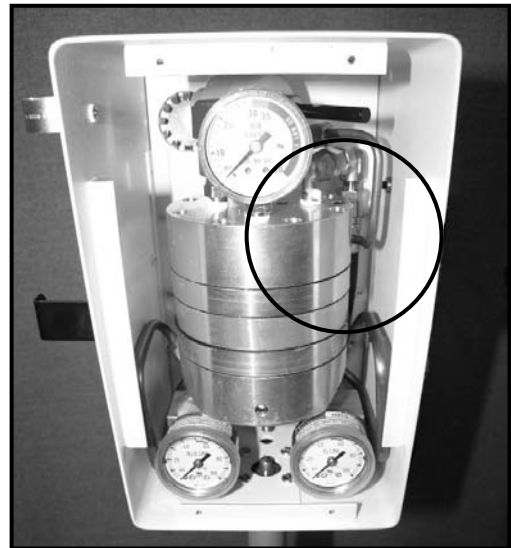


Fig. 2

1. Using PA-1626-000 Hex Key, remove four (4) screws and remove the cover (Fig. 1)
2. Locate the quick release lever inside the unit – Porter mfg. (Fig. 2)

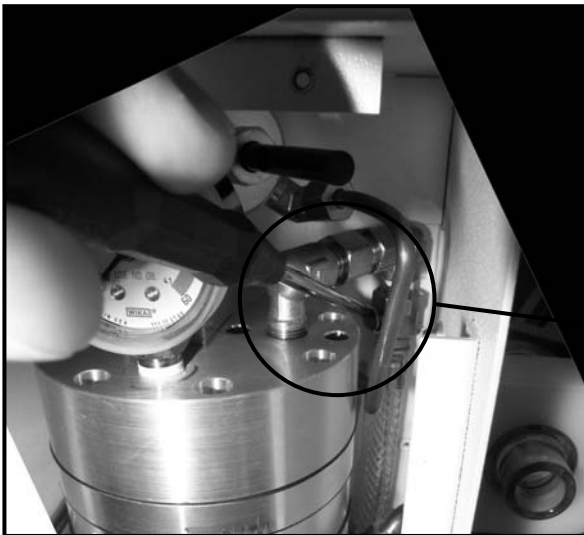


Fig. 3

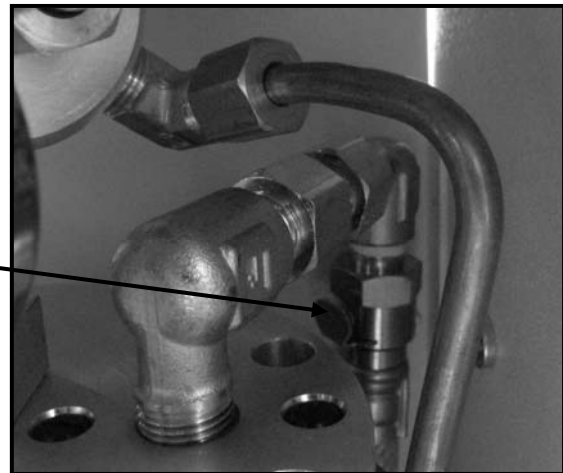


Fig. 4

3. Press quick release lever with flat head screw driver or equivalent to disengage hose and remove. (Figs. 3 & 4) Pull hose through rubber grommet gently so as not to pull the grommet out of position.

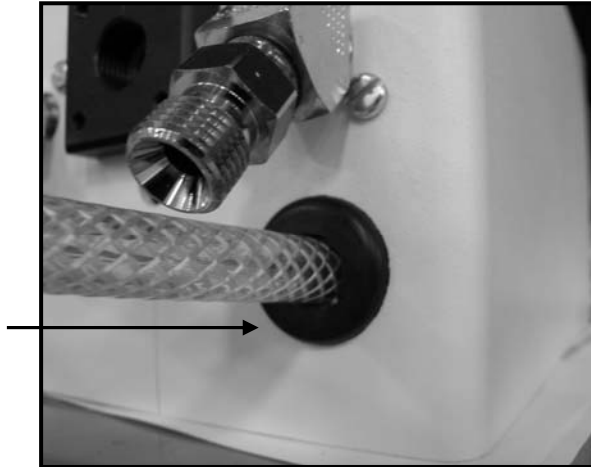


Fig. 5

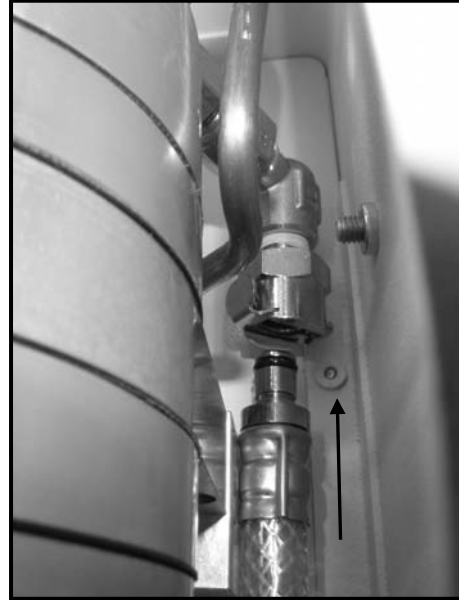
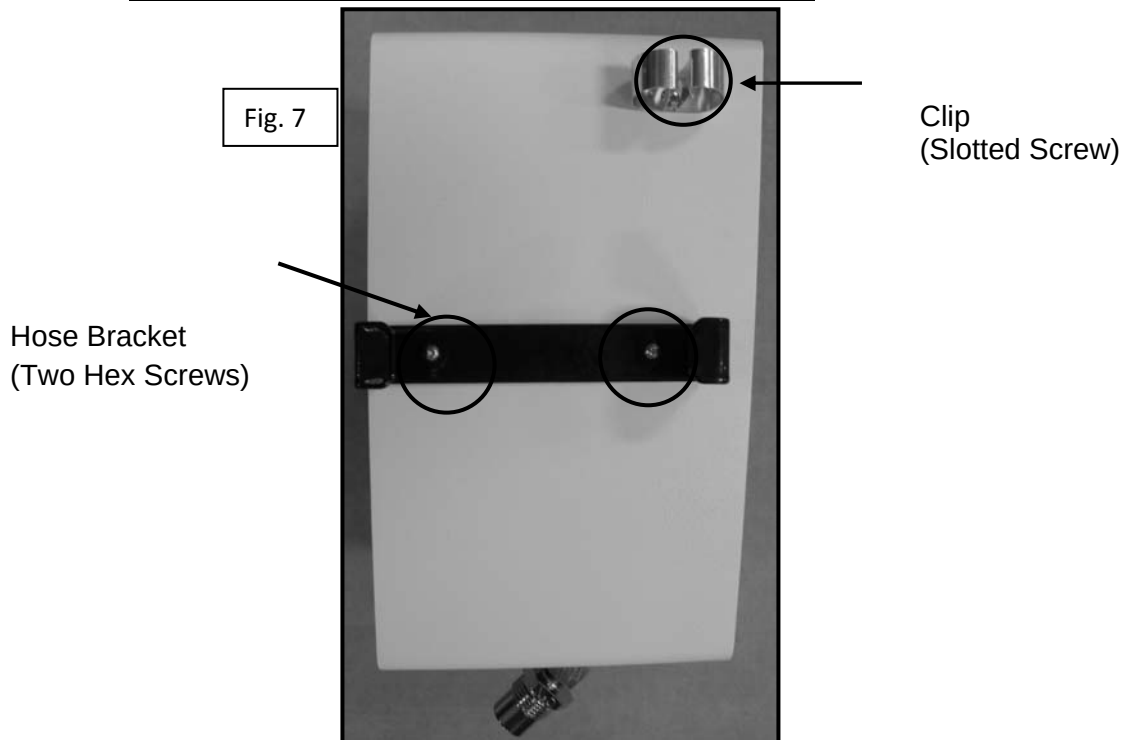


Fig. 6

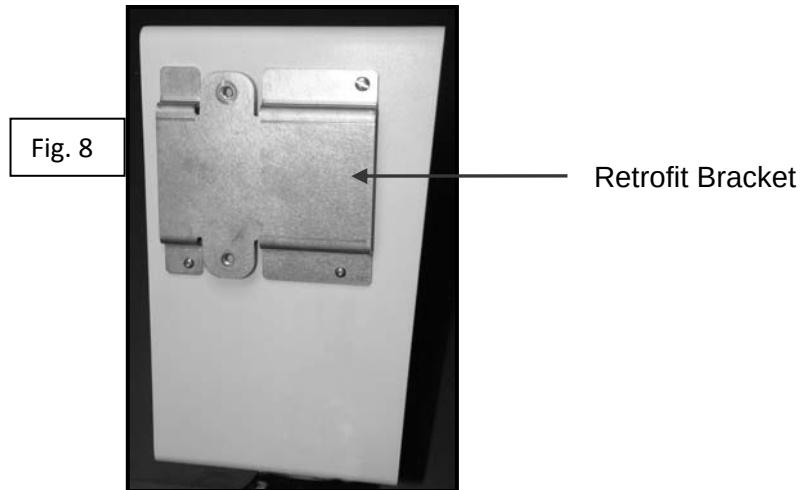
4. Gently feed new hose through grommet. (Fig. 5)

5. Align male quick connect fitting with female and push in to snap in place. (Fig. 6) Pull on hose to verify connection is in place.

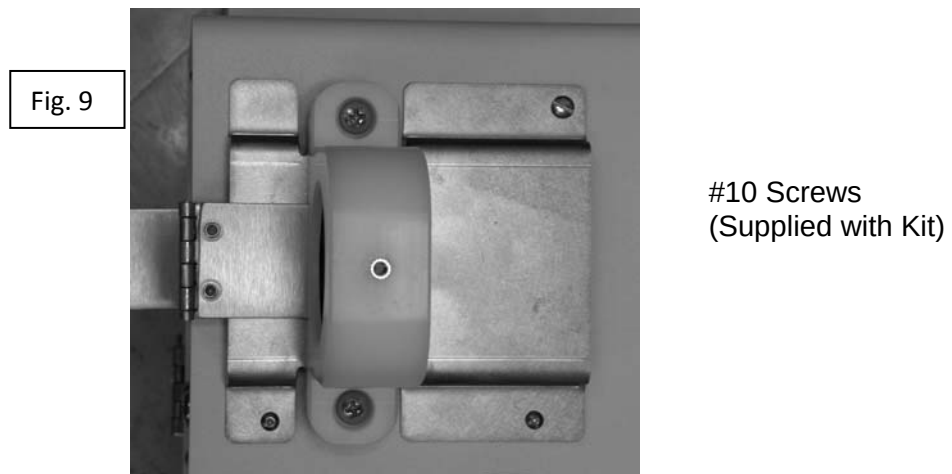
Installation of the Retrofit Bracket (Options 1, 2, 3)



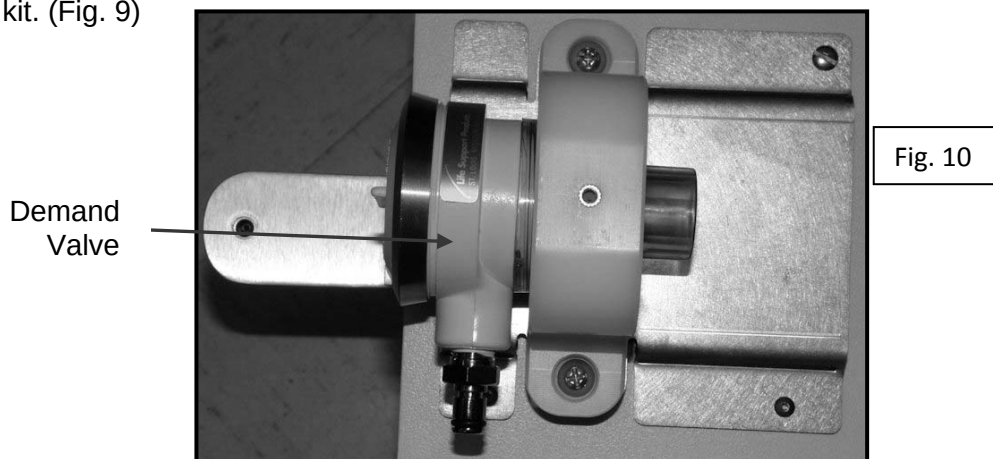
1. Remove Hose Bracket and Clip from left side of unit and discard the screws (Fig. 7)



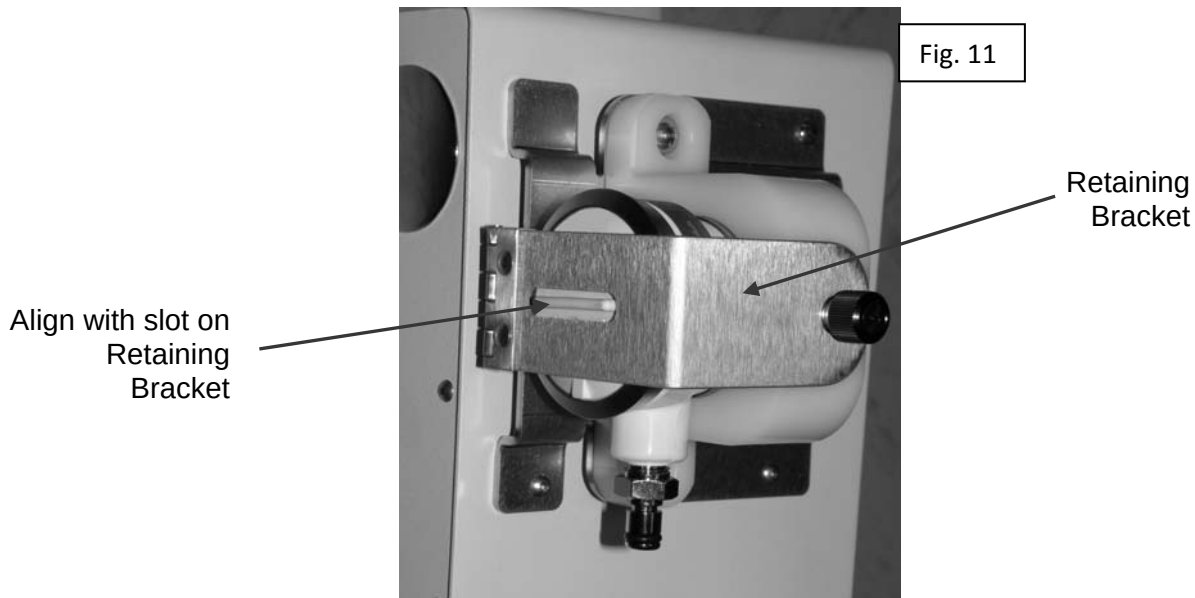
2. Install Retrofit bracket using the supplied PB-120-079 and PB-120-119 screws. (Fig. 8)



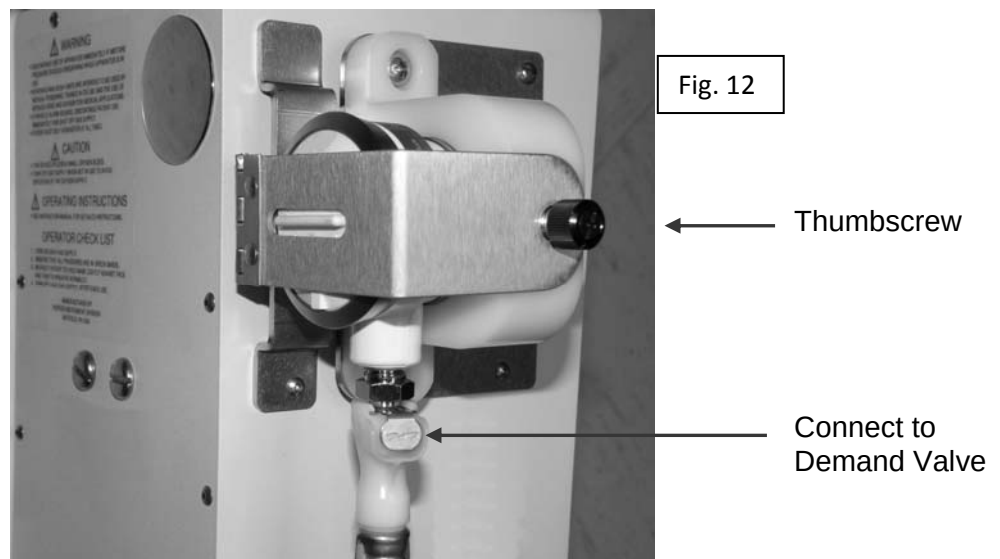
3. Install B-5573-000 manifold block assembly using #10 screws (PB-120-137) supplied with retrofit kit. (Fig. 9)



4. Install demand valve (not supplied) into manifold block. (Fig. 10)



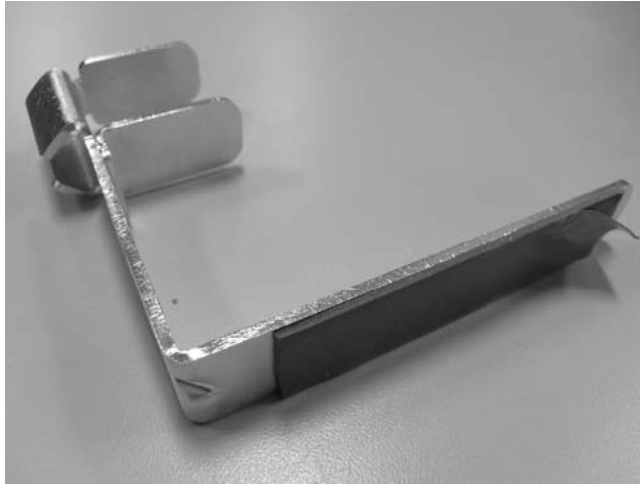
5. Align demand valve with slot on Retaining Bracket (Fig. 11)



6. Secure Demand Valve to retaining bracket using thumbscrew. Install quick connect from hose to Demand Valve. (Fig. 12)

7. Use Retrofit Nitronox HD with Porter Disposable Breathing Circuit as described in FM-1304 Using the Porter Disposable Breathing Circuit with Nitronox.

Mask Hanging Bracket Installation



1. Remove double sided tape backing on Mask Bracket



2. Install Mask Bracket approximately where shown.
3. Replace Front Cover

IMPORTANT:

**READ MANUALS FM-1308 AND FM-1309 COMPLETELY
BEFORE OPERATING THIS DEVICE**

Basic delivery technique is described. These manuals also contain instructions on periodically required checks to be performed by the user. These checks are necessary to insure the proper performance of the Nitronox HD device and its safety features. Retain these manuals (and original device manuals) for future reference.



WARNINGS AND PRECAUTIONS

These warnings and precautions are to help you to understand how to safely operate the Nitronox device. A WARNING alerts you to a possible hazard to people. A CAUTION alerts you to the possibility of equipment damage.

WARNING: New or modified central supply installations - **properly connected gas pipelines are absolutely essential to patient safety.** The authorized distributor or contractor should provide written documentation that all gas pipelines are connected properly and that the system has been pressure tested prior to use. While this is a good business practice, it is important that the user verify by their own test, independent of the authorized distributor or contractor, that all gas pipelines are connected correctly prior to using the system. **The ultimate responsibility of assuring that lines are not crossed rests with the user.**

Do not allow crossed lines to defeat the safety features of the Nitronox and/or central gas supply manifold systems. Crossed lines will create a dangerous and hazardous condition where, under a loss of oxygen supply, 100% nitrous oxide will be delivered through the oxygen delivery path and subsequently to the patient.

Maintain patient observation during procedures. Prevent over sedation. If a patient becomes over sedated when being delivered 100% oxygen [during an apparent loss of crossed lines], it is a definite indication of crossed lines. If crossed lines are suspected, remove the mask immediately and encourage mouth breathing. Deliver pure oxygen only if the oxygen source is independent from the suspected crossed lines area.

WARNING: Porter equipment utilizes the **cross+protection** system. The flexible hose and connectors that connect to the housing are diameter indexed; 3/8" O.D. for Nitrous Oxide and 1/2" O.D. for Oxygen. The **cross+protection** system is designed to prevent misconnection of Oxygen and Nitrous Oxide hoses. **DO NOT ATTEMPT TO CHANGE THE DIAMETERS OR CONNECTORS OF THE DEVICE!** Tampering with the **cross+protection** system constitutes acceptance of liability by the installer.

WARNING: Nitronox® Inhalation Analgesia systems are intended to be used by medical personnel trained in its use and the use of nitrous oxide and oxygen for medical applications.

WARNING: Do not use this device for the administration of general anesthesia or as a part of, or in conjunction with, a general anesthesia administration system.

Inspect and maintain the analgesia delivery system to prevent N₂O leaks in all hoses, connections and fittings. Have all leaks repaired immediately.

WARNING: Use Scavenging: Medical workers are exposed to N₂O during administration of N₂O/O₂ conscious sedation analgesia. Controls are effective in the patient treatment area to achieve low levels of ppm (parts per million) exposure. Controls include System Maintenance, Ventilation and Work Practices. Your accessory Nitronox Scavenger System is an important part of the system of controls in medical settings.

WARNING: When using a single use full face mask, not supplied sterile. Dispose of mask after use to prevent patient cross-contamination. When using multiple use mask, follow manufacturer's sterilization instructions.

CAUTION: Always use clean, dry medical grade gases. Introduction of moisture or other contaminants into this device may result in defective operation.

CAUTION: Do not attempt to repair, alter or calibrate this device. Unauthorized repair, alteration or misuse of this device is likely to adversely affect the performance and will void the warranty.

CAUTION: Never oil or grease any part of this system (minimize fire or explosion potential).