HOBIT Technical Memo No. 3

SUBJECT: Removal and Replacement of the Magellan Ventilator

Issue Date: 1/13/2020

MEMO: Removing and Replacing the Magellan Ventilator

As needed for preventative maintenance (PM's) or repairs, the following will give instructions for properly removing the Magellan ventilator and installing a replacement Magellan ventilator.

Please carefully read all of the following removal and installation instructions prior to removal.

Please refer to the referenced photos (pg. 6-8) and follow these installation steps in series. Read through the entire instructions before proceeding with removing or installing the Magellan.

1. Ensure all gas cylinders have been fully turned off.

2. Ensure that the gas piping, hoses, Magellan Ventilator and Witt Blender have each been "bled-down" so that there is no residual gas pressure remaining in any component of the Magellan ventilator system.

   a. Verify a zero gauge reading on both **Line** and **HP** gauges (Fig. 3) on both of the air and oxygen regulators. Verify that the pressure adjusting knob (Fig. 4) has been turned completely off to the counterclockwise position.

b. Verify a zero reading on the pressure gauge of the Witt Blender (Fig. 5). Verify that the Witt Blender adjustable regulator knob (Fig. 5) has been turned completely off to the counterclockwise position.

c. After steps a. & b., release any residual gas pressure in the Magellan, by opening the Magellan inlet supply valve (Fig. 2) and also opening the gas sample valve (Fig. 2). There should be no gas flow heard or noted.

d. When you have verified that there is no residual pressure in the ventilator, close both valves, i.e., the Magellan inlet supply valve and the gas sample valve.

3. Slowly loosen and disconnect the chrome female DISS nut attached to the green oxygen hose (Fig. 1). This is the main ventilator inlet supply gas connection.

   a. **Caution:** If you hear any gas flow as you loosen any connection, stop and re-tighten the O2 DISS nut and re-do the above steps to ensure all of the residual gas pressure has been removed from the manifold system.

   b. **Please use two wrenches when loosening these fittings.** One wrench to loosen and the other wrench to hold the opposing nut from turning.

4. Slowly loosen and disconnect the chrome female DISS nut that connects to the Magellan patient outlet supply (Fig. 1).

5. Disconnect the gas sample line (Fig. 2)

6. Holding the Magellan firmly, disconnect it from the pole mount (Fig. 1)

7. Reconnect the new Magellan to the pole mount.

8. Ensure the new Magellan gas supply valve is OFF and the gas sample line is OFF.

9. Reconnect the ventilator to the main inlet supply green hose (Fig. 1) and the patient outlet supply chrome DISS nut (Fig. 1), i.e., reversing the previous steps 3 & 4. Please use two wrenches again as noted above. Firmly connect the chrome DISS fittings. Do not over-tighten.

10. **NOTE:** Teflon tape is **not** required on these threads because these are DISS compression fittings.

11. Reconnect the gas sample line (Fig. 2).

12. Slowly turn on both air and oxygen HP gas cylinders and adjust the HP pressure regulator (Fig. 4) up to 80 psi and adjust the black Witt regulator (Fig. 5) to approximately 50 psi.

13. If you hear any leaks coming from any of the connections, stop and recheck the previous steps.

14. If there are no leaks, turn on the Magellan system to the normal operating pressures and verify that all gauges are reading properly and that the Magellan ventilator is operating properly.

TESTING

Removal and installation of the Magellan ventilator should have no operational effect on the ventilator. However, please test the system by connecting a test lung to the ventilator, connecting the 10 cmH2O PEEP valve and compressing the chamber to a pressure of 2.5 ATA. Observe that the PEEP pressure is holding properly. Adjust the VT during compression and decompression to ensure there are no functional problems during these pressure changes.

The New Magellan was tested at our facility prior to shipping for operation, leaks and ability to maintain PEEP pressures.

Please notify me immediately if there are any problems with this procedure or with the operation of the newly replaced Magellan ventilator.

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RETURNING OLD MAGELLAN

1. Carefully re-pack your old Magellan ventilator into the same box that the new Magellan arrived in. If the original box is not available, please use a shipping box that will provide enough space to carefully pack and pad the ventilator from any shipping damage.
2. We have provided a return FedEx shipping label and "Fragile" labels. Attach the FedEx label and "Fragile" labels to the box.
3. Take a photo of the box showing the return FedEx shipping label.
4. Please send photo and FedEx tracking number to my email.

SHIP TO:

HennepinHealthcare Research Institute
901 South 6th Street
Minneapolis, MN 55415
C/O Bill Gossett / HOBIT Trial
612-873-3961

Thank you,

Bill Gossett
Principal Project Manager
Director of Hyperbaric Operations - HOBIT Trial
Direct: 612-873-3961 | Cell: 612-868-1254
bill.gossett@hcmed.org | hcmc.org

HennepinHealthcare Research Institute

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Reference Photos

WARNING!!
This "Pin-Wheel" flow indicator should **NOT** be connected to your system. Please remove if it is. Refer to HOBIT Technical Safety Bulletin No. 4

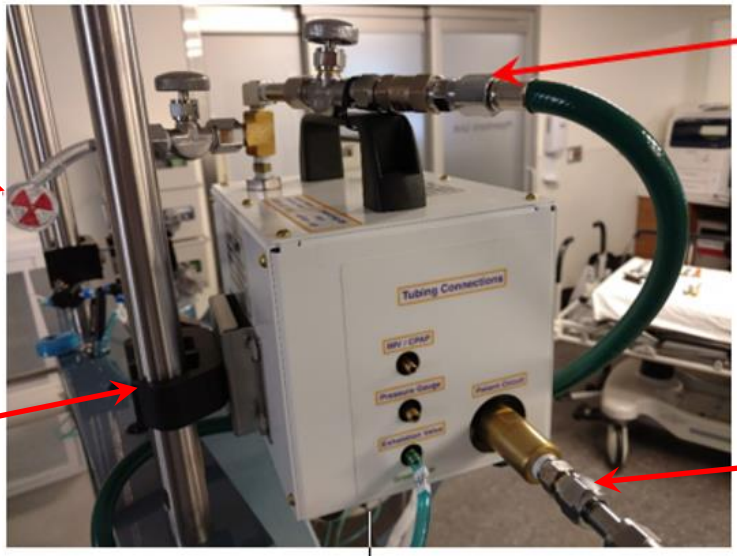


Fig. 1

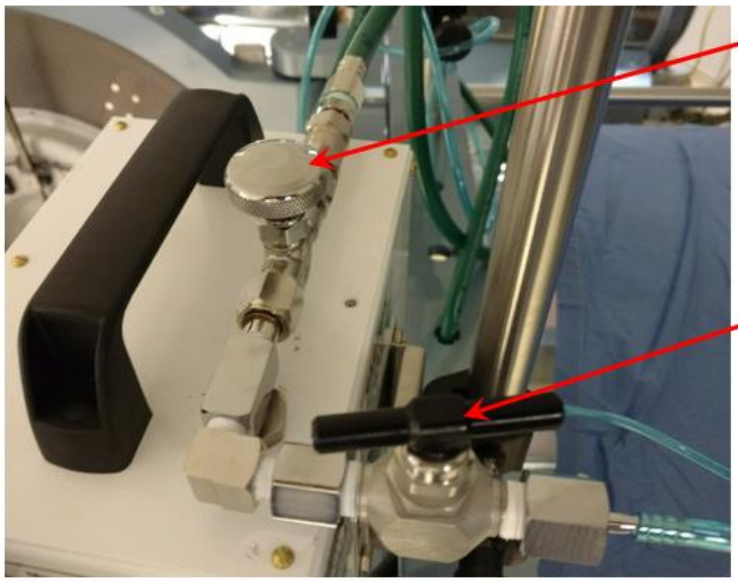


Fig. 2

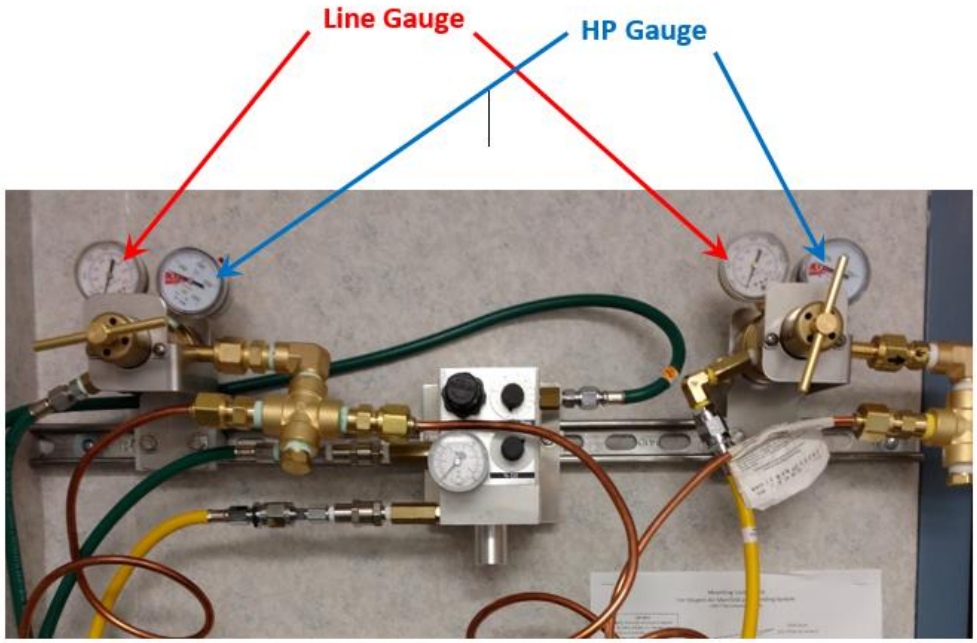


Fig. 3

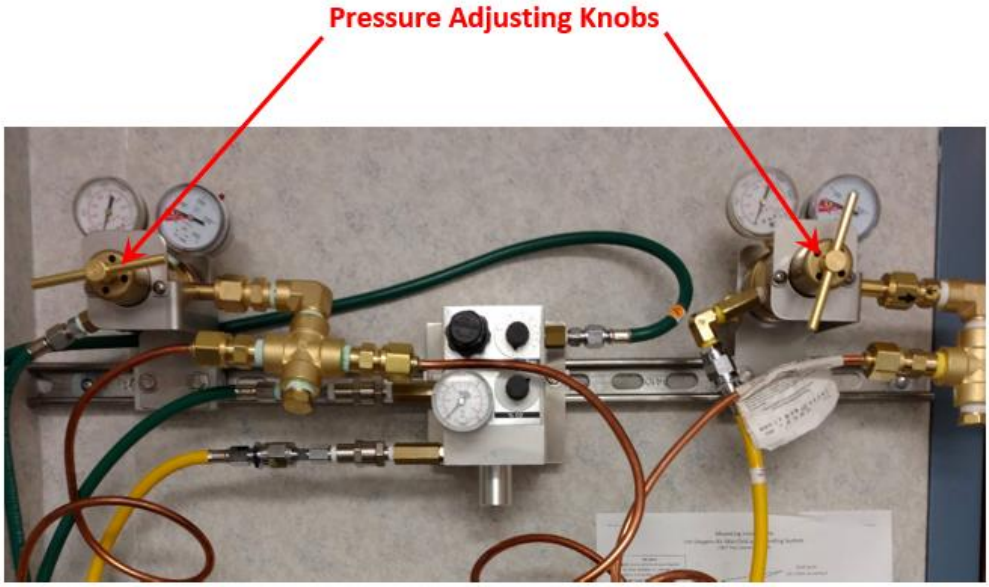
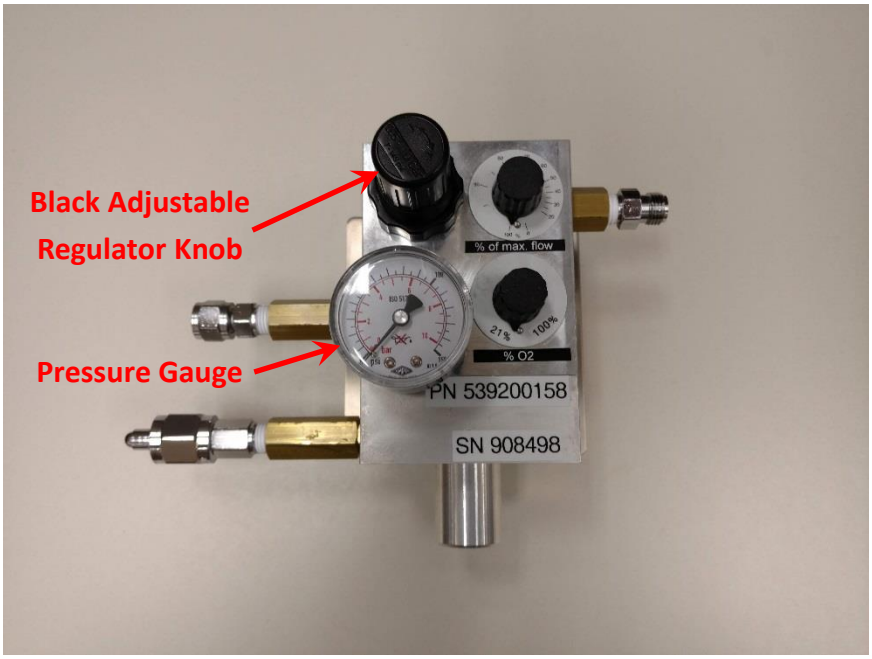


Fig. 4

Fig. 5



Witt Oxygen Blender