

# Vetamac Vapors

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We're just a phone call away!  
Feel free to call between your annual service  
visits if you have questions or are having any problems.  
We are your anesthetic machine service company.



## What Does It Mean? Part I

Recently a veterinary hospital staff member asked "What does it mean to calibrate a vaporizer?" There is some confusion related to defining the calibration, service, preventive maintenance and recalibration of vaporizers. This confusion also raises the question of what it means to service an anesthetic machine. This issue of Vapors is Part I of a discussion of these questions.

Often when a Vetamac service representative calls on a hospital to present our services, the response is that they have their machines serviced by participating in a vaporizer exchange program. These programs fail to address the other components of the machine. If it is difficult to keep a patient anesthetized, the problem is most often attributed to the vaporizer. However, according to Vetamac's service records from 2010, only 3.3% of the vaporizers verified were likely to be causing problems that would make it difficult to keep patients anesthetized. This difficulty is usually created because of a problem with other components of the machine that dilute the concentration of anesthetic in the breathing system.

What does it mean to service an anesthetic machine? It is much more than a simple pressure test. A pressure test should be a routine part of the pre-anesthetic protocol. Vetamac's service protocol includes inspection and verification of 15 different components on the anesthetic machine. (See Table 1 for a list of the components.) All of these components except the wheels can have an effect on the delivery of anesthetic and the concentration of anesthetic inspired by the patient. It is surely evident that the vaporizer would not always be the cause of problems keeping patients anesthetized.

What does it mean to calibrate a vaporizer (or any other instrument)? According to the Random House Dictionary© it means to determine, check, or rectify the graduation of any instrument giving quantitative measurements. According to The American Heritage Stedmans Medical Dictionary© it means to check, adjust, or determine the graduations of a quantitative measuring instrument by comparison with a standard. The latter definition will be referenced as we discuss the vaporizer and its calibration and service.

The three points addressed in this definition are to check, to adjust, or to determine graduations on a vaporizer by comparing it to a standard. When a vaporizer is calibrated in the field, it is simply a check, using a Riken analyzer to verify that the output of the vaporizer is within tolerance. Vetamac's service protocol also requires that a pressure test be performed on the vaporizer to verify that there are no leaks. If the output is within tolerance and the pressure test is passed, then it is not necessary to remove the vaporizer for service. If, however, the output is not in tolerance, then the vaporizer must be removed and sent to a facility that can adjust or recalibrate the output of the vaporizer. The vaporizer must be disassembled to accomplish this.

The next issue of Vapors will discuss the recalibration of a vaporizer.

By Harry Latshaw  
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Table 1  
List of Components

- |                          |                            |
|--------------------------|----------------------------|
| 1. Oxygen Supply         | 9. Manometer               |
| 2. High Pressure Circuit | 10. Non-Rebreathing System |
| 3. Flowmeter             | 11. Vaporizer              |
| 4. Flush Valve           | 12. Breathing Tubes        |
| 5. Low Pressure Circuit  | 13. Breathing Bag          |
| 6. Sodalyne Canister     | 14. Wheels                 |
| 7. One Way Valves        | 15. Cleanliness            |
| 8. Pop-Off Valve         |                            |



Jim Coons joined Vetamac in January of 2011 as the Sales Manager. Jim has been involved with the veterinary community for over 35 years. His career started out with Holmes Serum Company in Indianapolis and has included time with numerous other veterinary companies, including The Butler Company for 13 years. Jim has also worked for Lumenis, selling surgical lasers and Suburban Surgical supplying stainless steel products. Before Vetamac, Jim worked for PVP as a sales rep in Indiana, Illinois, and Michigan.