



INHALATION ANESTHESIA SYSTEMS

HONEST ANSWERS FROM KNOWLEDGEABLE PEOPLE

Fraud Alert

Anesthesia Equipment Scams in Research Environments

Currently there are over 15 major players in the research animal inhalation anesthesia equipment field. Most began by selling to veterinary private practices and migrated to research because of money. The new target markets and their money, coupled with investigators and purchasing agents unfamiliar with anesthesia equipment leaves a door open to fraud.

Some companies are ethical, experienced and knowledgeable. Some started as local anesthesia repair services and may be ethical, but lack the engineering and/or medical experience mandatory for safety and quality. An unethical few are out to make as much money as they can, via outright fraud, misleading advertising, after sale cover ups, and switching vaporizers. Almost all have no ongoing, hands-on, on site experience.

At VetEquip, we count ourselves among the best and we have a few good competitors. Competition forces us to continue our R&D of new products. A review of the competitive products that come onto the market after ours shows similar operation and appearance. We consider that to be the highest form of praise. We exchange information, increasing all of our knowledge. The few of us who have skill, experience and good ethics are unanimous in our belief that you, our customers, should be made aware of the scams our less ethical competitors have been using.

Remanufactured Vaporizers

Here's the scam: Company X pays less than \$10.00 for an Enflurane vaporizer. They spend a few dollars in labor and parts to "remanufacture" it into an Isoflurane vaporizer. The vaporizer, originally made for an agent vapor pressure of 172mm Hg (Enflurane) is drastically adjusted, but not recalibrated for an agent with a vapor pressure of 240mm Hg (Isoflurane.) You pay \$800.00 to \$1200.00 for the vaporizer. When it goes out of calibration, a reputable service company won't work on it and you can't use it.



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“Agent Specific” means that each vaporizer is manufactured for a specific anesthetic agent and its vapor pressure. The vapor pressure is critical in the design and manufacture of the expensive temperature compensating device and rotor valve. Consequently, remanufacturing a vaporizer which was made for one agent and is going to be used for another is labor intensive and expensive.*

These counterfeit vaporizers are now flooding the private practice veterinary market and making fast inroads into research facilities. We have documentation on “remanufactured” vaporizers, in which the “remanufacturing” consisted only of changing the labels, stopping the dial from turning to its former 7% position, and adjusting to give the almost correct Isoflurane output. Nothing inside the vaporizers (cloth wicks, temperature compensating device, rotor valve, all the seals and gaskets) had been changed. To use such a vaporizer in a human hospital is just cause for the hospital’s surgery unit to be shut down.

* The only time that fact does not hold true is when a Halothane vaporizer is dedicated to Isoflurane or vice versa. The vapor pressure of Halothane is 243mm Hg. The vapor pressure of Isoflurane is 240mm Hg. This was a peer-reviewed, published article (Steffey EP, Woliner MJ, Howland D. Accuracy of Isoflurane delivery by Halothane-specific vaporizers. Am J Vet Res. 1983Jun; 44(6):1072-8.) Establishing the safety and accuracy of Halothane vaporizers dedicated to Isoflurane use. No study has ever been published or even submitted for review to espouse the use of Isoflurane in Enflurane vaporizers.

“Minimal” Waste Gas Exposure

Here’s the scam: Most anesthesia equipment vendors choose to deal with the compliance critical waste gas pollution issue by ignoring it. Your EH&S Department will not ignore it, nor will AAALAC’s site inspection team, nor will OSHA inspectors. In the United States we must comply with OSHA recommendations regarding anesthetic waste gas exposure.

Watch out for these

Instructions to pre-charge the chamber with anesthetic gas, open the lid and place the animal inside. Agent saturated gas is going to be pushed out of the cage and into the room. OSHA’s Permissible Exposure Limits (PELs) will be immediately exceeded.



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Induction chambers without positive pressure seals or sealed with weather stripping.

Independent facilities testing have found the atmosphere around these chambers to be excessively out of compliance. Ask for test results proving they don't leak or ask to do a test yourself, with the caveat that you can return the system if it fails.

Multiple animal manifolds. The nosecones may not leak, ask about the manifold itself.

Nosecones with valves that are activated only when the animal breathes thus no saturated gas is released from the line except into the animal's lungs. Engineers have a difficult time envisioning a negative pressure activated valve so sensitive that it is opened by the strength of a mouse's inhaled breath, while at the same time unaffected by the stream of air moving past the other side of the valve at a rate of 500ml per minute.

Vaporizer Service Switches

Here's the scam: Service Company X services your vaporizer. They send you a "remanufactured" vaporizer in exchange permanently for your vaporizer. They sell your Isoflurane vaporizer to someone else. They get paid for service and paid for the vaporizer sale, less the minimal amount they spent buying or "remanufacturing" the vaporizer they sent to you.

Even when there is no intent to scam and all vaporizers are actually serviced by reputable (insured) service companies, the benefits of an exchange program are solely to the service company. Only one trip to each facility is required. There is no need to go (or ship vaporizers) twice. No inventory of "loaner" vaporizers needs to be maintained. Facility C gets Facility B's freshly serviced vaporizer, Facility B gets Facility A's and so on. You don't know what you're getting; only what you're giving away.

There are "rebuilt," "remanufactured," and true Isoflurane vaporizers. They all look the same on the outside however internal quality has huge variations. Equipment that serves in a life sustaining capacity should be traceable such that age, service history, prior damage, etc. can



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always be checked. Compliance with traceability, while mandatory with human medical equipment, is not generally followed with veterinary equipment. The belief of all ethical, reputable veterinary anesthesia equipment dealers is that it should be. Traceability is mandated in many larger pharmaceutical and educational facilities so be sure to check your facility equipment protocols before choosing an “exchange” program.