



# Anesthesia Machine Maintenance Schedule

## Before Every Surgery

Inspect machine connections and rubber parts for signs of looseness, damage or wear.

Perform leak test (instructions below).

Maintenance Complete	Next Scheduled Maintenance

### To perform leak test:

1. Close pressure relief valve (APL valve).
2. Remove breathing bag and cover opening.
3. Place thumb over patient connection of Y-piece.
4. Slowly activate oxygen flowmeter to pressurize system to 20 cm H<sub>2</sub>O (as registered on the circuit pressure gauge).
5. Turn off flowmeter. If pressure holds steady the machine is leak-free. If pressure drops, open flowmeter until the pressure stabilizes at the 20cm H<sub>2</sub>O setting. This will determine the magnitude of leak.
6. If flow of greater than 300ml/min is required to keep pressure stable, the system leak will significantly impact machine performance and must be corrected.
7. Replace breathing bag and repeat steps 3-5 to determine integrity of breathing bag.

What if machine leaks? - Check the following as possible leak locations:

1. **Breathing bag**  
If leak occurs in leak test step 7 replace breathing bag.
2. **Breathing circuit**  
Install new breathing circuit or occlude inhalation/exhalation openings to determine if leak originates from breathing circuit.
3. **Vaporizer fittings (see Figure 1)**  
Are fittings securely attached to vaporizer?  
Is tubing securely attached to fittings?
4. **Upper and lower canister gaskets (see Figure 2)**  
Check for loose absorbent grains between canister/housings/gaskets.
5. **Improperly seated canister**
6. **Negative pressure relief valve (see Figures 3 & 4)**  
Remove valve and occlude opening to determine if leak originates from negative pressure relief valve. Is the o-ring under valve undamaged? Is there a hole in the rubber diaphragm inside valve?
7. **Pop-Off Valve (APL valve) (see Figure 5)**  
Remove valve and occlude opening to determine if leak originates from pop-off valve. Is the o-ring under valve undamaged?
8. **O-rings under chrome retaining rings (see Figure 5)**  
Are o-rings present and undamaged?

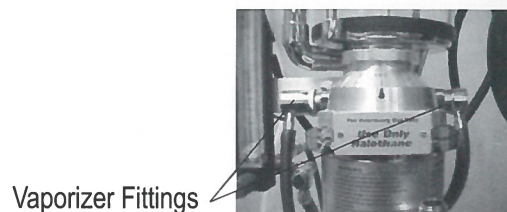
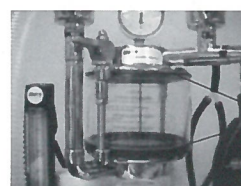


Figure 1



Upper and Lower  
Canister Gaskets

Figure 2

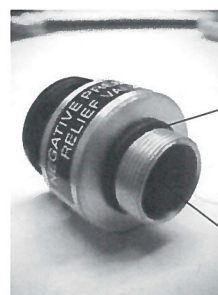


Figure 4



Figure 3

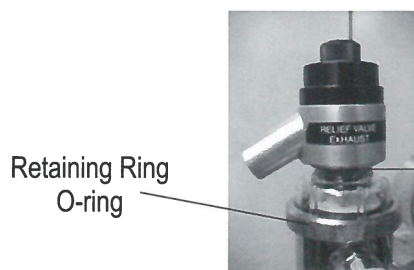


Figure 5

## Every Day

Clean machine:

Remove breathing bag, wash bag with warm water and mild detergent, rinse well, hang to dry.

Remove breathing circuit, wash circuit with warm water and mild detergent, rinse well, hang to dry.

Remove white disks from inhalation and exhalation valves, wipe off with soft cloth, wipe out valves, reassemble.

Remove absorber canister, wipe off gaskets, canister and absorber housings.

Maintenance Complete	Next Scheduled Maintenance

## Every Week

Replace absorbent material. *Important: depending on duration of use, the absorbent may have to be replaced more often. Moisture content of absorbent must be maintained once package is opened. Water is essential for the chemical reaction to take place and will be lost if the machine is not used for extended periods of time or if opened packages of absorbent are not properly resealed.*

Maintenance Complete	Next Scheduled Maintenance

## Every Year

Service and calibrate vaporizer (contact your dealer for details).

Maintenance Complete	Next Scheduled Maintenance

## Every Two (2) Years

Replace the following components:

Maintenance Complete	Next Scheduled Maintenance

		VMS Plus	VMS	VMC	VME
Black rubber circuit tubing	part number	91315075	91315075	91315075	91315075
	qty	49 in.	63 in.	36 in.	31 in.
Upper canister gasket	part number	92316066	92316066	92316066	62956200
	qty	1	1	1	1
Lower canister gasket	part number	92316067	92316067	92316067	N/A
	qty	1	1	1	
Valve o-rings	part number	63200145	63200145	63200145	63200145
	qty	2	2	2	1
Retaining ring o-rings	part number	63200113	63200113	63200113	N/A
	qty	2	2	2	
Clear dome assembly o-ring	part number	N/A	N/A	N/A	63200113
	qty				2
Valve disks	part number	10049000	10049000	10049000	10049000
	qty	2	2	2	2



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