

OMV 50

Service Instructions



created by the participants of the
CCBRT Anaesthesia Maintenance Training Course 2008



Step 1

Remove pointer.
(1 screw)



Step 2

Remove label and scale.
(2 screws)



Step 3

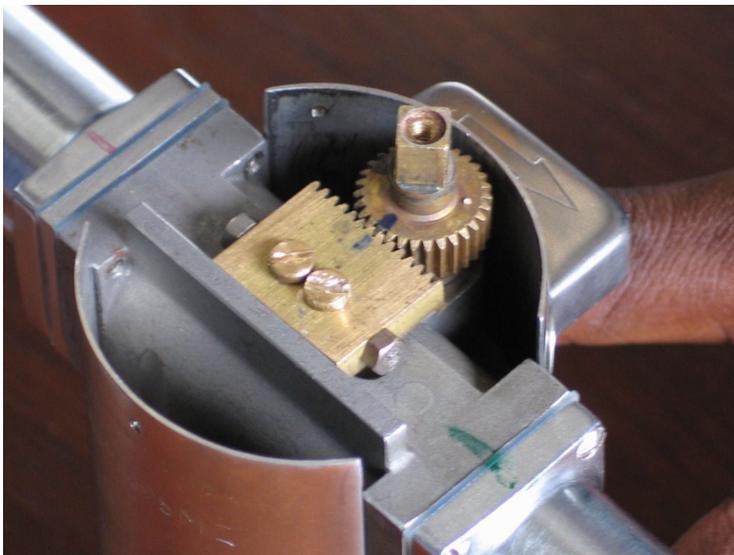
Remove cover.
(3 screws)



Step 4

Mark position of inlet or outlet cone.

Also mark the position of the rack.



Step 5

Remove the rack.

(2 brass screws)

Important: Open the 2 counter nuts and screws from the sides first. Otherwise you will damage the 2 brass screws.



Step 6

Remove inlet cone.

(4 screws)

Remove regulator assembly.

(2 gaskets)



Step 7

Check the regulator and the gaskets.

Clean everything with ether or alcohol.



Step 8

Remove outlet cone.
(4 screws, 1 gasket)



Step 9

Remove slide valve by pushing from outlet end of the housing.
If you have difficulties use a wooden or plastic tool.

Important: No metal tool! Metal will damage the valve's surface.



Step 10

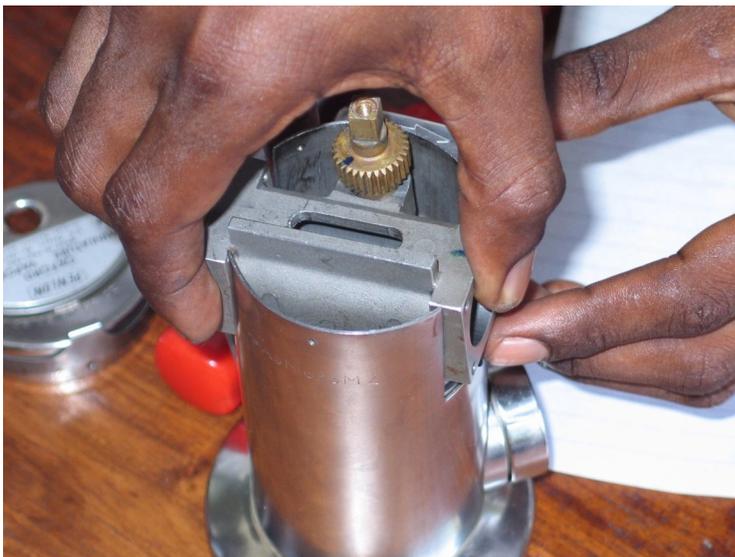
Clean the device with alcohol or ether. Obstinate dirt can be removed with metal polish, if you wash away the polish afterwards carefully.

Before assembling you may lubricate the valve lightly with vaseline.



Step 11

Unscrew the regulator housing.
(4 screws)



Step 12

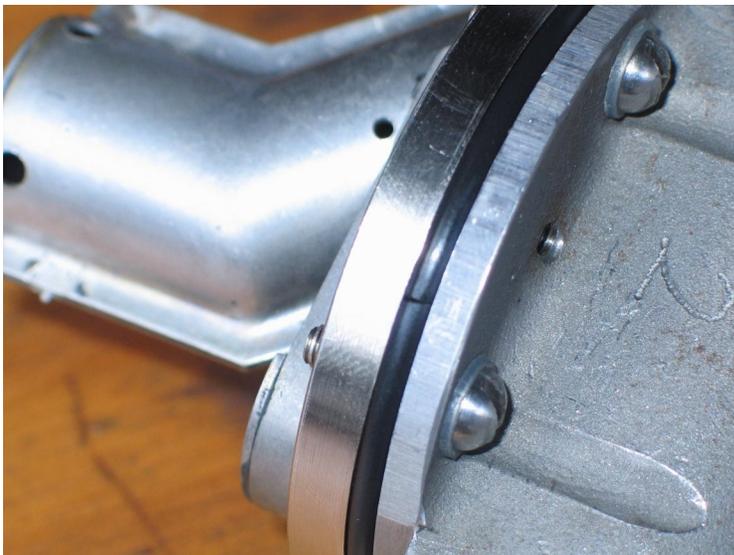
Remove the regulator housing.



Step 13

Clean the regulator with ether or alcohol.

Check every moving part for smooth motion.



Step 14

Probably you need a new O-ring. If you don't have the original you may take another one. Put a bigger O-ring in and tighten the 4 screws of the clamp ring lightly just to keep the O-ring in position. Cut it now accurately. Work carefully, otherwise you will have leakage problems. Put a bit vaseline on the O-ring before inserting the regulator back to the housing.



Step 15

Check the vaporizing chamber and the metal mesh for damages and clean everything.



Step 16

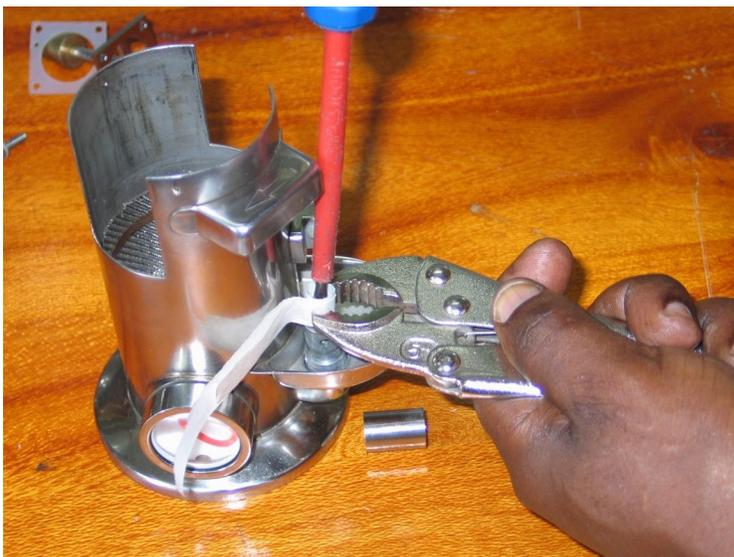
Remove the lever of the halothane insert mechanism.

(1 screw)



Step 17

Clean the parts.



Step 18

Only in case of a leakage continue dismanteling the rest of the mechanism. Hold the sleeve and unscrew the inner screw.

Important: To loose – turn clockwise



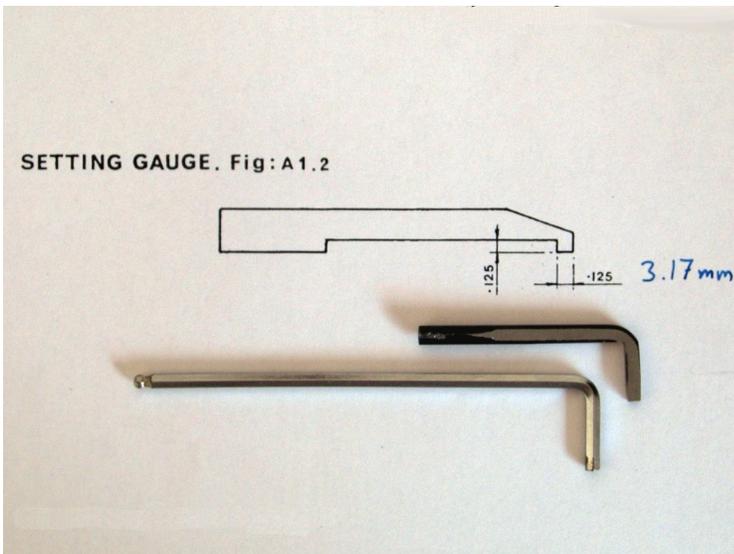
Step 19

While assembling be sure that the lever covers the hole of the white plastic nozzle properly.



Step 20

After reassembling and tighten all screws check the pointer setting. Move the pointer between 50 and 60 and insert the setting gauge through the outlet. Now move the pointer to the left. It should indicate 35 (+/- 1mm).



Step 21

The original setting gauge is shown in the drawing above. The same result you get with a modified 4mm allen key. Even a normal 3mm allen key works fine.



Step 22

Finally the leak test. Block outlet connector and connect an air source and a pressure gauge to the inlet. (An old sphygmometer works very well) Pump air into the system until approximately 200 mmHg. Close the air way. The pressure will fall slowly. The time for falling until 190 mmHg should be at least 30 seconds. Do the test with pointer in 'OFF' and in '3.5' position.



Step 23

Leaks become visible by brushing a little soap water around the connections. Bubbles will appear.

Note: Around the brass rack on top of the regulator only use ether or alcohol. The slider gets stick after the soap solution is dried.

Finally some dos and don'ts

- Store and transport the OMV with pointer in 'O' position.
- Do not expose the vaporizer to full sun.
- PENLON recommends a maintenance every 6 month.

Please report improvements and comments to frank.weithoener@web.de