

Fitting a new cylinder or soda-lime tray sealing O-ring

Scope: This document applies to all Tafonius and Junior machines

Date: 16 January 2019

Note: for these large O-rings the term O-ring or Seal is used inter-changeably

You will need:

- Small screwdriver, sharp thin-bladed knife (craft knife)
- RTV108 Sealant
- 1 x 180A3239 Black O-ring

There are 2 large O-rings associated with the main cylinder on all Tafonius machines. One O-ring is found at the bottom of the main cylinder and the other is found at the bottom of the soda-lime tray. Together they form a seal above and below the soda-lime tray and are thus very important in preventing leaks from the patient circuit.

If the O-rings become damaged, distorted or loose then they will need to be replaced. Leaks can often be felt when feeling around the top/bottom of the soda-lime tray when the machine is pressured to 20 or 40cm H₂O using CPAP or the leak test procedure.

Procedure

The replacement of both seals is similar. For the soda-lime tray seal the soda-lime tray can easily be removed from the machine, emptied and turned upside down to facilitate removal and fitting of a new O-ring. For the lower cylinder seal, the removal cleaning and replacement must be done in situ. However, this process is made much easier on Junior machines where the cylinder can be rotated to the horizontal position.

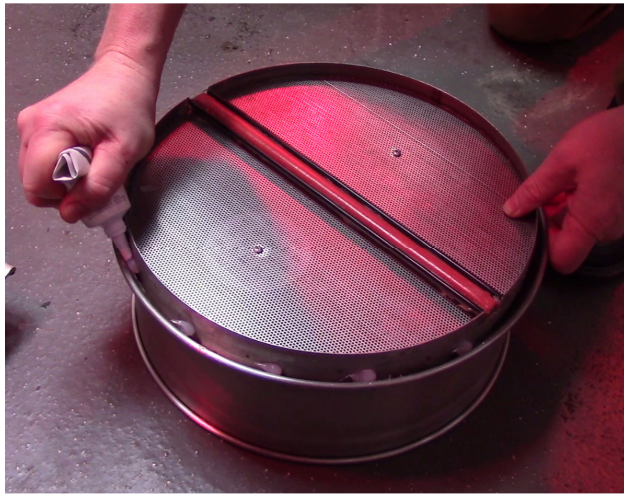
Removal

Use a small bladed screwdriver or similar to lever part of the O-ring out of its groove. Once lifted, the rest of the O-ring will come out easily.

Preparation



It is important that all traces of the previous bonding silicon is removed before fitting the new O-ring, otherwise uneven seating of the O-ring will occur and a good seal will not be obtained. Use a thin-bladed sharp knife to completely detach and remove the old silicon.



Place a blob of RTV 108 Silicon sealant every 5-6cm around the rim of the cylinder/soda-lime tray. Make sure the amount applied is enough to be level with the metal rim so that good contact will occur when the O-ring is applied.

Fitting

Once the RTV108 sealant has been applied, unfold the O-ring from its packet and make sure it forms a nice circle with no twists. Lay the O-ring into the groove and apply gentle pressure to push the O-ring into place.



For either O-ring, put the soda-lime tray back into the cylinder and close the cylinder to compress the new O-ring. Leave for 10 seconds and then remove the soda-lime tray, so that there is no pressure on either of the new O-rings.

Allow 4-8 hours to dry. Drying time will depend on ambient temperature. If the machine needs to be used before the RTV 108 is fully dry then there is a danger of the parts sticking together. To prevent this, lightly dust the sticky/tacky parts with talcum powder before use.

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